### TeledyneReport

For the Year 1977

Water Pik: From Better Oral Hygiene to Good Clean Fun



This Teledyne Report describes the products and activities of Teledyne Water Pik and the consumer markets it serves. Teledyne Water Pik has developed from a one-product company that was devoted exclusively to oral hygiene appliances, into a diverse, multi-product company that serves various consumer needs in the U.S. and throughout the world. Noted for its innovative products, and outstanding quality and service, Teledyne Water Pik is pursuing an active product development program that will soon add other innovative products to the eight major lines described in this report.

**TELEDYNE REPORT** featuring subjects of particular interest from Teledyne activities, is issued on a quarterly basis. Previous topics include:

**Dental Health:** Teledyne produces many of the instruments, materials and supplies that have helped revolutionize dental care in the United States.

Space Navigation: Whether the payload is a spacecraft for Mars or a satellite for earth orbit, the first minutes of flight, under the guidance of an on-board computer, are the most critical to the success of the mission.

**Analytical Instruments:** Detecting and measuring small amounts of specific substances in large volumes of other materials is the key to controlling many vital processes.

1776-1976: A look back at various technologies as they were two hundred years ago, compared with the technologies of today and Teledyne's involvement in them.

Life Insurance: This largest segment of the insurance industry not only provides financial security for millions of families and individuals, but is also one of the nation's major sources of investment cooled.

The Refractory Twins: Two high melting point metals, tungsten and molybdenum, play versatile and vital roles in every modern industrialized society.

The Instrument Makers: Teledyne's oldest company goes back 131 years. From surveying the Old West, to moon mapping and machine tool encoders, its history is the history of the technology of measuring.

**Industrial Engines:** Compact portable power from gasoline and diesel piston engines has taken the drudgery out of manual labor. Now the goal is to reduce noise and emissions.

Job Corps: A decade of motivating and training a half million alienated and disadvantaged young people has produced some remarkable new teaching methods... and a lot of good citizens. Friendly Explosives: Using explosives to save lives in aircraft emergencies may sound unlikely, but it's the safest, fastest, most reliable method ever developed.

Microelectronic Hybrids: From vacuum tube to transistor to integrated circuit, the history of electronics has been one of fitting more and more complex electronic circuitry into less and less space. A hybrid microcircuit is a sophisticated form of microelectronic packaging that goes a step beyond the individual large scale integrated circuit.

The Energy Options: Nuclear fuels and coal are both abundant enough to make a significant contribution to U.S. energy needs over the next several decades. Unlike many other energy sources, the technology to use them on a large scale exists today.

**Workmen's Compensation Insurance:** Most working people are already protected. The goal is coverage for every employed person.

**Drilling for Offshore Oil:** Almost half our national resources of oil and gas are believed to lie under offshore waters. The technology for getting them out is here — but it won't be easy.

The Search for Oil: With supplies dwindling and demand growing, sophisticated geophysical techniques are being brought to bear on the problem of locating new oil deposits.

High Speed Tool Steels: These precision, premium-priced alloys are vital to the production of virtually every commodity we use in modern life.

Energy Crisis in the Computer Room: As the quality of utility electri-

cal power falls off and brownouts and blackouts become more common, the incidence of computer failures goes up. Solid-state Uninterruptible Power Systems can solve the problem.

Raydist: This ultraprecise electronic navigation system can pinpoint locations at sea with a sensitivity of one and a half feet at ranges of up to 250 miles from base stations.

**Welding:** One of industry's most versatile production techniques, welding is used in the manufacture of virtually every type of fabricated metal product made today.

General Aviation Engines: Propeller driven aircraft powered by conventional piston engines are not only alive and well more than 30 years after the advent of the jet, they dominate air activity roday.

**Rubber:** Rubber compounds are being called on to do new technological jobs in applications ranging from industrial tires to Teledyne's new automotive bumper system that will dissipate five-mile-per-hour impacts.

Loran: Loran was one of the first all-weather electronic navigation systems. Recent Teledyne innovations have lowered costs and greatly improved its range and accuracy.

Seismology: This relatively young science has expanded from the classic study of earthquakes to become an important tool in oll and mineral exploration, detection of underground nuclear explosions and earthquake hazard reduction.

Casting: The simple process a small boy uses when he casts a fin soldier is the basis of a high rechnology industry that produces items ranging from high temperature turbine blades to 90-ton steel mill rolls.

AIDS: Aircraft Integrated Data Systems keep a running record of the vital functions of the new jumbo jets and provide airlines with an important tool for lowering costs associated with maintenance, fuel management and crew proficiency testing.

Thermoelectrics: Generators that convert hear directly into electricity are providing a practical new power source for applications ranging from space exploration to remote weather stations.

Thin Metals: Less becomes more when space-age metals are rolled our into thin strip and foll. These new materials, already being used in thousands of products, are making new metal-working techniques possible.

The Reproduction of Music. Men began experimenting with methods of recording sound over 150 years ago, but it remained for electronics and some very recent developments to allow music to be reproduced with concert-half realism.

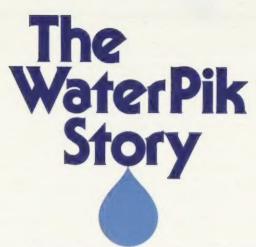
The Crowded Spectrum: The lower portion of the radio spectrum is already overcrowded with hundreds of wireless services. Microwave devices such as the traveling wave tube are opening higher frequencies for practical use.

Science and Cinematography: Modern rechniques of slow motion cinematography let scientists and engineers analyze actions and events that happen too fast for the eye to follow.

Superalloys: Materials that retain high strength at temperatures approaching 2000°F make the jet age possible.

Jets of Water for Dental Health: Studies show that high-pressure pulsed jets of water are a valuable aid in the care of teeth and gums.

The Last Eight Miles: The controlled descent to the surface of the moon was accomplished through use of a century-old principle called the Doppler effect.



Innovative products, exceptional design, precise quality control, and outstanding customer service have made Water Pik one of the hottest consumer brands in the marketplace today.

Once in a very long while, a truly innovative product appears in the marketplace, captures the interest and imagination of the public, and becomes a best seller and a household word almost overnight.

Fifteen years ago, the name Water Pik was introduced as the trademark for a totally new idea in home oral hygiene — an irrigator that employs a pulsating jet of water to help cleanse the teeth while it stimulates and massages the gums. Used as an adjunct to regular brushing, it has been hailed by thousands of practicing dentists as the most valuable contribution to home oral care since the advent of the toothbrush.

The Water Pik Oral Hygiene Appliance has become one of the most resounding successes in the history of modern marketing. Today, after 15 years of steadily increasing sales and innumerable competitors who have fallen by the wayside (at one point there were 26 brands on the market), the Water Pik Oral Hygiene Appliance is still by far the dominant product in its category, with perennial popularity that continues to increase each year. Through that product alone, the brand name Water Pik has become widely known in every one of the 50 United States, and in some 40 foreign countries.

Most companies are fortunate if they have one such major success to their credit, so when a company repeats the process with a series of highly successful new products, you know that something special is happening.

Teledyne Water Pik has done just that. While the oral hygiene appliance line was establishing its position in the marketplace, work was already beginning on an entirely new product that was designed to create for the whole body the same refreshing sensation the oral hygiene device produces in the mouth.

After several years of research and engineering development, the new product was introduced under the name The Shower Massage by Water Pik, and created a totally new, multi-million dollar product category. In the scant three years since its introduction, the Shower Massage has become a leading product line, and is dominant in the marketplace despite a flood of competitors.

Today, eight separate product lines are manufactured and marketed under the Water Pik brand name. In addition to the two lines just mentioned, there is the Sonic Siren Smoke Alarm by Water Pik, One Step At A Time brand smoking withdrawal system, Instapure water filter, a home hydrotherapy appliance, The Nurtury infant feeding system, and the Countdown device for weight control.

Most of these products entered the marketplace as innovations that had never before been offered to the public. Teledyne Water Pik is actively engaged in a continuing program to further expand its lines by researching and developing other innovative new products. Some of these are expected to be introduced in 1978.

The following names which appear in this publication are trademarks of Teledyne, Inc.: Water Pik, Sonic Siren, One Step At A Time, Step Four, Instagure, Nurtury, Super Saver, Countdown, and AR.

Water Pik Oral Hygiene Appliances The original Water Pik oral hygiene appliance was invented by an engineer whose family dentist was convinced that an apparatus that would produce a pressurized jet of water would be of great value to his patients for the care of their teeth and gums. The first model produced was marketed directly to the dental profession as a prescription item for their patients. Its pulsating jet action soon proved to be highly effective in cleansing food particles from between the teeth and under dental appliances, and in flushing out the gum pockets surrounding the teeth in those patients who have periodontal or gum disease. The massaging ac-

tion it produced was also found to be beneficial in stimulating the blood circulation through the gum tissues and improving their health.

Further investigation determined that the most beneficial effect occurred when the jet pulsated at certain optimum rates and a specific pulsation range was patented as a feature of the Water Pik appliance. Today's Water Pik appliances produce up to 1200 pulses per minute at pressures up to 85 pounds per square inch.

Throughout its history, the Water Pik instrument has gained substantial support from the dental profession. Over 90,000 dentists have recommended the oral ir-

From the National Advertising of Teledyne Water Pik:

# Better Oral Health for the Whole Family



rigator to their patients. This represents more than 4 out of 5 of all dentists.

The Water Pik appliance is now marketed directly to consumers in a variety of models that have evolved from the original version. At the top of the line is the Water Pik Oral Hygiene Center that combines the oral irrigation device with a cordless electric toothbrush and color-coded brushes and irrigator tips for four members of the family.

The appliance is also offered without the electric toothbrush feature in several models. One of those is a new Slimline model that provides the same performance as other models but is designed with a slimmer case for travel use.

The cordless electric toothbrush featured with the oral hygiene center is also available separately in a convenient automatic recharging stand with extra brushes. Brushing action starts automatically when the brush is pressed against the teeth, or it may be started and stopped manually with a switch.

Water Pik oral hygiene products are perennial favorites that show continued growth each year.







Water Pik Shower Massage A shower was a shower was a shower before Teledyne Water Pik looked into the field. In fact, research showed that virtually no one knew what brand of showerhead they had in their homes, did not care, and had no choice in the buying decision since the showerhead came with their house or apartment. Furthermore, most people indicated that there were a thousand things they would buy for their homes before they would think of buying a new showerhead.

In view of this it may be surprising that the Shower Massage by Water Pik was an overnight success and has become one of the best selling consumer products on the market.

The fact is that the Shower Massage is much more than a showerhead. Its massaging action, which can be regulated in both speed and force, can be a soothing and refreshing experience, or an exhilarating and exciting one.

A control ring on the Shower Massage allows the user to choose a conventional steady spray or an invigorating pulsing massage or any combination in between. The pulsing action is produced by a hydraulic mechanism in the head that is powered by the flow of water itself.

From the National Advertising of Teledyne Water Pik:

# The Greatest Improvement in Showers Since Hot Water

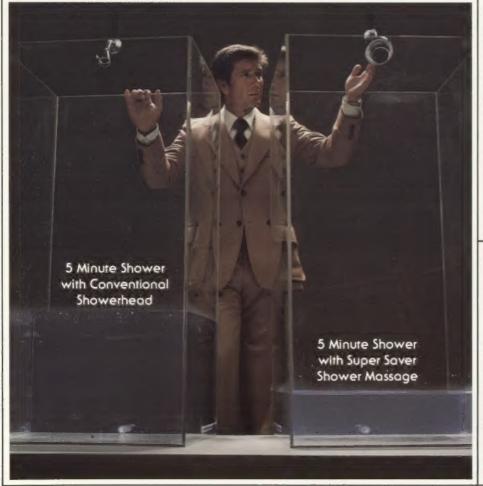


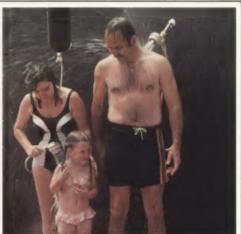
The Shower Massage was originally introduced in two versions. A wall-mount version fastens directly to the shower pipe as a replacement of the conventional showerhead. A European-style hand-held version, with a flexible chromium plated hose, clips into a bracket to operate as a conventional showerhead does, or may be detached and hand-held. The hand-held feature allows the user to direct the pulsating massage to any part of the body for relief of tension, relaxation of sore muscles, and other therapeutic benefits. It is also convenient for shampooing or bathing children.

Tests have shown that at 30 pounds per square inch

water pressure the Shower Massage uses only about 4.5 gallons of water per minute, compared to about 7 gallons per minute for the average conventional showerhead.

The Shower Massage is now also available in the Super Saver model which is designed to reduce water and energy consumption even further. Tests have shown that the Super Saver model uses about one-third the amount of water used by the average conventional showerhead. It has been estimated that an average family of four, using the Super Saver in place of a conventional showerhead, can save as much as 22,000 gallons of water a year, and up to \$106.00 per year on the cost of heating water.







Sonic Siren Smoke Alarm by Water Pik

warning devices, designed primarily for commercial buildings, have been around for many years. They are heat sensitive and alarm only in extremely high temperatures. Until recently, there were virtually no early warning fire detection devices available for the consumer who wanted to protect his home and family.

As new technology emerged, Teledyne Water Pik became interested in developing a consumer product which would provide an early warning of a fire. Using this technology, Teledyne Water Pik has introduced the Sonic Siren Smoke Alarm. The presence of even a slight amount of smoke — long before it is visible to the eye — changes the current flow through the detection chamber. This change is electronically sensed and sounds an alarm.

The Sonic Siren Smoke Alarm has a unique pulsating siren sound which sets it apart and above other smoke detectors on the market. Clinical studies conducted by audiology experts at a leading university have shown the Sonic Siren to awaken people faster and with a more heightened sense of urgency than the traditional horn sound found on most other smoke detectors. In addition, this unique sound can be heard above all other household noise, can penetrate doors and walls more effectively, and it can be heard by individuals with slight, often unnoticed, hearing loss.

Because the Sonic Siren Smoke Alarm is powered by one 9-volt battery it is effective even in fires which cause utility power to fail. One battery provides one year of protection. A tiny battery condition light flashes every five to ten seconds to indicate battery power, and an audible warning sounds intermittently for at least seven days when batteries need replacement. A convenient test button on the face of the unit allows the consumer to test the sensitivity of the unit with just the press of a button.

Since the Sonic Siren Smoke Alarm must be mounted on the ceiling or wall, Teledyne Water Pik took great pains to make it unobtrusive and aesthetically pleasing.

From the National Advertising of Teledyne Water Pik:

## The Early-Warning Fire Detection Device For Your Home







One Step At a Time Brand by Water Pik There are over 50 million cigarette smokers in the United States, and many of them, recognizing the health hazards involved, want to quit. It was found, in fact, that 9 out of every 10 smokers would like to quit and would try if they thought they could succeed.

It's not hard to understand the difficulties of giving up smoking. To kick the habit, the smoker must battle not only the physical addiction to nicotine, but a strong psychological addiction as well. This problem of coping with the withdrawal of two strong habits at the same time has caused the almost universal failure of quitting cold.

Focusing on these two problems, a team of California doctors devised and patented a gradual smoking withdrawal system. Teledyne Water Pik obtained an exclusive license to produce and sell the system in the U.S. The product was introduced under the brand name One Step At A Time.

The system consists of four filters, each precision engineered to progressively remove more and more of the tars and nicotine from cigarettes. The first filter removes approximately 25 percent of the tars and nicotine. The second removes 50 percent, the third 70 percent and by the time the smoker gets to filter four he has removed 90 percent of the tar and nicotine as well as 90 percent of the noxious gases. Suggested use for each filter is two weeks. At the end of eight weeks, the smoker is withdrawn from the physiological nicotine dependence and in most cases is able to quit entirely.

Although eight weeks is the recommended schedule to progress through the system, some people might prefer to take a little longer. For these people Step Four replacement filters give the user a little more time to complete the smoking withdrawal program.

One Step At A Time and Step Four are among the most popular of the Teledyne Water Pik lines.

From the National Advertising of Teledyne Water Pik:

### Stop Smoking the Same Way You Started...One Step At a Time







**Instapure by Water Pik** The deteriorating quality of domestic water supplies in the United States has been widely publicized in the last several years. Studies conducted and published by the U.S. Department of Public Health, the Environmental Protection Agency, and other governmental agencies have confirmed that the problem exists in many areas of the country and is getting worse nearly everywhere. About one-third of the total U.S. population uses water which is in part made up of waste waters discharged from municipal sewers.

Most municipal water treatment plants use the sand filtration method, a hundred-year-old technology that does little more than remove sediments from the water. Chlorine is then added to kill pathogenic microorganisms. While chlorine is necessary, it can compound the health problem by combining with other chemicals that may be in the water to form harmful compounds such as PCB's and chlorinated hydrocarbons.

One of the most effective ways to remove these im-

purities from our water is to filter it through granules of activated charcoal. Steps are being taken to implement this system into a few municipal water supplies. However, even the Federal government concedes that it may take decades to clean up our water.

Teledyne Water Pik investigated ways in which the consumer himself could do something about his own drinking water. Although there were some filter devices on the market, these were bulky devices that had to be installed in the water pipeline by a plumber. Both initial cost and maintenance cost were high, and in most cases all water was filtered, even if it was used to wash floors.

The Instapure water filter by Water Pik was developed to eliminate these shortcomings. It can be installed on a kitchen faucet by the user in a few moments and gives a choice between filtered or unfiltered water at the turn of a knob. The filter, which can be replaced in a moment, uses activated charcoal to give the user clearer, cleaner and better tasting water for drinking and cooking purposes.

From the National Advertising of Teledyne Water Pik:

### Gives You Cleaner, Clearer, Better Tasting Water







A Foot Massager by Water Pik In an average week, approximately 500,000 Americans, both men and women, will experience foot disorders requiring professional attention and hydrotherapy treatment. Teledyne Water Pik became interested in this field as an extension of its leadership in the field of hydrocare products for the home. So-called "foot baths" had been on the market for some years, but none of these offered a professional quality massaging action, most were poorly engineered and shoddily built, and all presented a serious potential shock hazard to the user.

Teledyne Water Pik designed and engineered a multipurpose hydrotherapy appliance that is now marketed under the Water Pik name. It is built of the finest materials and provides four times more massaging action than any other currently available product. Its unique double-wall construction keeps hot water hot longer and cool water cool. A three-speed control allows the user to select the degree of massage, from mild and relaxing to deep and penetrating. A unique slanted bottom lets the user relax comfortably in a chair when using it as a foot massage and makes it easier to fill and empty.

Above all, it was designed to be the safest product of its kind. The motor and electrical system are totally encapsulated and sealed to eliminate shock hazard. In addition, the unit will not cause electrical interference with television or radio reception, and the motor is thermally protected against damage.

The appliance is much more than a deluxe foot bath. In addition to soothing tired feet it can be used to soothe the aching pains of muscles and joints in hands, wrists,

elbows, and knees.

The American Podiatry Association has given its Seal of Approval to the appliance. In the short time since its introduction, this product has already been acclaimed by numerous podiatrists, physical therapists, and other professionals, as well as by large numbers of pleased — and soothed — consumers.

From the National Advertising of Teledyne Water Pik:

# New Way to Get Your Feet Feeling Good Fast







The Nurtury by Water Pik There has been a growing awareness in recent years of the importance of good nutrition during the first year of an infant's life, both in relation to the baby's health during that first year and to the development of full mental and physical potential in later years. At the same time there has been increasing concern among pediatricians, nutritionists and parents with the amount of starch, sugar, salt, and other additives found in commercially prepared baby foods.

After some years of pediatric, nutritional and engineering research, Teledyne Water Pik has developed the first and only total infant feeding system that enables a mother to conveniently, quickly and economically prepare fresh and wholesome baby foods in the home. Trademarked "The Nurtury", it allows her to control the content and quality of the food, know exactly what her baby is eating, and save considerable money over the cost of commercially prepared baby foods. In many cases the same freshly prepared foods that the rest of the family

eats can be used before the salt and seasonings are added.

The Nurtury consists of a series of related products. Basic to the system is the Nurtury Baby Food Maker which is used to grind freshly-cooked foods into any one of three textures, depending on the baby's growing needs. The food is ground directly into 4-ounce meal-size containers that can be used for serving or storage.

Another major part of the system is the Nurtury Baby Food Warmer with serving tray. The warmer heats food to serving temperature and maintains that temperature automatically. The Serving Tray holds three of the 4-ounce servers and anchors itself to a table with a suction cup.

Other specially researched feeding aids include a newly designed Mother's Feeding Spoon and a Baby's Self-Feeding Spoon, a spill resistant Adjusta-Flo Training Tumbler, and an easy-on Overall Bib that gives greater protection to the baby's clothes than a conventional bib.

The grinder may also be used for preparing special sauces, spreads or dips.

From the National Advertising of Teledyne Water Pik:

## The Natural Alternative to Commercially Prepared Baby Foods







Countdown by Water Pik A recent study showed that 38 percent of American men and 55 percent of American women felt they were overweight. It's reasonable to assume that if they "felt" overweight, they probably were. Few other subjects have created as much personal interest and as many fad approaches as the subject of weight control. Unfortunately, most methods have failed to achieve lasting results.

As early as 1962 a researcher proposed the theory that behavior modification could play an important role in weight control. Where most other theories had focused on how much a person ate, this new idea stressed the importance of how a person ate, and how that behavior could be modified.

Based on 15 years of research findings along these lines, Teledyne Water Pik recently introduced their newest product — Countdown. It is a pocket-sized electronic counter/pacer that enables a person to eat more slowly and achieve a sense of fullness and satisfaction

with a smaller amount of food. It sets a slower pace for chewing and monitors the number of bites per meal.

The first week of the program is used to establish a baseline of the person's existing eating habits. As the program progresses, the number of bites taken at each meal is slowly reduced, but the new behavior of eating more slowly and chewing more thoroughly allows the body's satiation mechanism to come into action with less food. There is no calorie counting or dietary change.

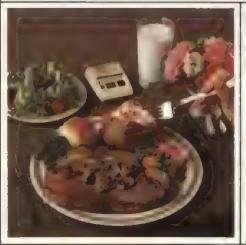
Subjects typically report a weight loss of one to two pounds per week. Equally important, they report a rediscovered pleasure in the taste of food and increased pleasure in the act of eating. By the third week of the program the time taken to consume a meal typically will have been extended by 15 to 20 minutes.

Most important of all, the subject's eating habits can be permanently changed so that a new lower weight can be maintained, even if the Countdown unit is no longer used regularly.

From the National Advertising of Teledyne Water Pik:

### Count Off Unwanted Pounds with COUNTDOWN









Quality Control Products as popular as those in the Water Pik line do not get that way simply because they were good ideas in the first place, nor does a brand name as respected as Water Pik achieve that status solely through advertising and promotion. If any two things set Teledyne Water Pik apart from its competitors, they are a superior product quality control system and exceptionally responsive customer service.

Quality control monitors the manufacturing lines at every step of the process. It conducts inspection and testing of incoming raw materials, parts and components, as well as subassemblies produced on the manufacturing line

Finally, with the exception of the One Step At A Time smoking filters, which because of their nature cannot be tested in this way, each and every product manufactured by Teledyne Water Pik receives a "live" functioning test that either duplicates or simulates the operation of the appliance as the consumer would use it.

Each oral hygiene appliance, for example, is filled with water and run by an inspector who moves the speed control through its full range, checks for leaks, monitors pressure and pulsing rate and the electrical load on the motor. Each Shower Massage is similarly operated with water and checked for proper functioning at all its settings, as is the Instapure water filtering appliance.

Testing each Sonic Siren Smoke Alarm is a 40 minute process in which the device is operated and checked in an environmental chamber that exposes it to a range of temperature and humidity levels that it might encounter in use. Its sensitivity is also tested in a smoke chamber.

In addition to these tests, samples of every Water Pik product line are chosen at random on a regular basis and sent to the Water Pik reliability laboratory where they are hooked up and operated continuously until they fail. These tests simulate in a short time the amount of usage the product would receive in over 10 years of home use.

Quality control at Teledyne Water Pik begins with careful Inspection of incoming materials and parts. Here, a motor lamination is checked for dimensional accuracy on an optical comparator TOP: Water Pik Oral Hygiene Appliances are checked in the reliability laboratory by running samples continuously until they fail, simulating more than ten years of normal use.

BOTTOM: Each Shower Massage by Water Pik is individually hooked up and tested with water to assure proper functioning.







**Customer Service** The ultimate quality control inspector is the consumer, and Teledyne Water Pik goes to great lengths to be attentive to and responsive to the needs, suggestions and inquiries of the user.

There are over 100 independent service centers across the nation which are prepared to replace or repair any defective Water Pik product. In addition, customers are welcome to return problem units through the mail to the Fort Collins Customer Service Repair Department. At this factory center each unit is fully inspected, cleaned, and repaired within twenty-four hours and returned to the customer.

Each repaired unit is recorded and over the following year randomly selected customers are called to determine the quality of the repair work and their satisfaction with the service they received.

Repairs aren't the only way Teledyne Water Pik services its customers. A section of the Water Pik Customer

Service Department responds quickly to customer inquiries, typically answering more than 850 letters weekly. Each letter received is answered by the Word Processing staff. Using magnetic typewriters and a high speed document printer, personalized letters are sent to every customer who writes with a problem or inquiry.

Customer Service does not simply respond to problems. Every week owners of Water Pik products are surveyed by telephone to determine consumer satisfaction with product quality. This provides information about how Water Pik products perform in actual use. The information gathered is compiled to provide reports for various company departments.

The goal of Customer Service is to turn complaints into compliments. There is no brand name in the consumer arena today that is more trusted and more respected than the Water Pik brand. Teledyne Water Pik planned it that way.

Customer Service personnel handle hundreds of phone inquiries each day regarding Teledyne Water Pik products, and also conduct telephone surveys to determine customer satisfaction with

products and service

TOP: Teledyne Water Pik's Word Processing staff receives more than 850 letters a week and uses magnetic typewriters, high speed document printers and well-trained personnel to respond quickly with personalized letters

BOTTOM: Modern computer techniques are used to keep track of service requests from customers and to alert the manufacturing divisions to potential problems.

The Customer Service Department also handles special mailings to customers and special coupon offers such as this Fire Safety Kir that was offered to purchasers of the Sonic Siren Smoke Alarm.









### Letter to Shareholders:

Teledyne's net income for the year ended December 31, 1977 rose to \$194.1 million from \$136.8 million in 1976. Earnings per share in 1977 were \$16.23 compared to \$10.63 in 1976. Sales of consolidated companies were \$2.21 billion, up from last year's \$1.94 billion.

For the fourth quarter of 1977 net income was \$64.2 million, or \$5.38 per share, compared to last year's fourth quarter net of \$36.5 million, or \$3.04 per share. Consolidated fourth quarter sales rose to \$589 million in 1977 from \$515 million in 1976.

The equity method of accounting was adopted in 1977 for certain investments of our unconsolidated subsidiaries, and the results of operations for 1976 have been restated to reflect this method. The use of equity accounting increased 1977 net income \$10.4 million or \$0.88 per share and 1976 net income \$1.9 million or \$0.16 per share. If equity accounting for these investments had not been used, net income would have been \$183.7 million or \$15.35 per share in 1977. In the fourth quarter, the effect of equity accounting was to increase net income \$2.7 million or \$0.23 per share in 1977 and \$1.1 million or \$0.10 per share in 1976. The use of equity accounting had no effect on 1975 and prior years' net income.

Revenue and net income by business segment are shown on page 34 of this report. Management's Discussion and Analysis of Summary of Operations is given on page 33. Each of our segments of business set new records for net income with industrial products showing an especially significant gain. The company's casualty insurance group was profitable for the first time in several years. This improvement helped increase equity in net income of unconsolidated subsidiaries to \$42.2 million from \$23.5 million. Without the use of equity accounting for certain investments, equity in net income of the unconsolidated subsidiaries would have risen from \$21.6 million to \$31.8 million, still a record for any year.

While we are pleased with these gains in our insurance operations, we believe that there is room for further improvement. We are confident that the steps we have taken during the past few years, together with continuing effort in the future, will bring about a higher level of profitability in our insurance companies.

Chairman of the Board of Directors

Hony E. Singleton

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Gronge A Roberts

### **Consolidated Statements of Income**

For the Years Ended December 31, 1977 and 1976		
	1977	1976
Consolidated Sales	\$2,209,731,000	\$1,937,556,000
Consolidated Costs and Expenses:		
Cost of sales	1,624,913,000	1,437,169,000
Selling and administrative expenses	266,968,000	254,606,000
Interest expense (Notes 4 and 10)	16,990,000	18,756,000
Interest income	(10,777,000)	(9,230,000)
Provision for income taxes (Note 9)	159,800,000	123,000,000
	2,057,894,000	1,824,301,000
Income of Consolidated Companies	151,837,000	113,255,000
Equity in Net Income of Unconsolidated Subsidiaries, after allocated interest expense and income tax items (excludes equity in unrealized depreciation on marketable equity securities of \$28,071,000 in 1977 and unrealized appreciation of \$35,157,000 in 1976) (Notes 4 and 10)	42,245,000	23,544,000
Net Income	\$ 194,082,000	\$ 136,799,000
Net Income Per Share (Note 2):		
Primary	\$16.23	\$10.63
Fully Diluted	\$15.86	\$10.36

### **Consolidated Statements of Retained Earnings**

For the Years Ended December 31, 1977 and 1976	_		
	_	1977	1976
Balance, Beginning of Year, as previously reported	\$	494,345,000	\$ 379,894,000
Effect on prior year of equity accounting (Note 15)		1,920,000	
As restated		496,265,000	379,894,000
Net income		194,082,000	136,799,000
Fair value of common stock dividends (Note 6)		(20,914,000)	(17,619,000)
Cash dividends on preferred stock		(1,739,000)	(2,365,000)
Difference between cost and book value of Unicoa treasury stock			(444,000)
Balance, End of Year	\$	667,694,000	\$ 496,265,000

### **Consolidated Balance Sheets**

December 31, 1977 and 1976

Assets		
	1977	1976
Current Assets:		
Cash	\$ 44,668,000	\$ 42,256,000
Marketable securities, at cost which approximates market	242,300,000	190,382,000
Receivables, less reserve of \$10,820,000 in 1977 and \$10,784,000 in 1976	252,445,000	211,124,000
Inventories (Note 3)	161,167,000	144,274,000
Prepaid expenses	6,006,000	6,414,000
Total current assets	706,586,000	594,450,000
Investments in Unconsolidated Subsidiaries (Note 10):		
Life insurance companies	252,080,000	236,627,000
Casualty insurance companies	180,059,000	97,894,000
	432,139,000	334,521,000
Property and Equipment, at cost (Note 4):		
Land	16,950,000	16,808,000
Buildings	113,120,000	109,409,000
Equipment and improvements	401,434,000	378,937,000
	531,504,000	505,154,000
Less accumulated depreciation and amortization	287,861,000	270,910,000
	243,643,000	234,244,000
Other Assets:		
Cost in excess of net assets of purchased businesses (Notes 8 and 10)	30,795,000	30,419,000
Other	6,977,000	13,911,000
	37,772,000	44,330,000
	\$1,420,140,000	\$1,207,545,000

The accompanying notes are an integral part of these balance sheets.

Liabilities	_	4000		
Current Liabilities:	-	1977		1976
Accounts payable	\$	96,733,000	\$	95,889,000
Accrued liabilities		147,702,000		132,253,000
Accrued income taxes (Note 9)		105,900,000		88,100,000
Current portion of long-term debt (Note 4)		5,192,000		4,709,000
Total current liabilities	_	355,527,000		320,951,000
Long-Term Debt (Note 4)		313,350,000		315,457,000
Deferred Income Taxes (Note 9)		58,000,000		65,800,000
Other Long-Term Liabilities		10,066,000		9,863,000
Commitments and Contingencies (Note 7)				
Shareholders' Equity:				
Preferred stock (liquidation preference \$18,261,000 in 1977 — Note 6)		516,000		516,000
Common stock (Notes 5 and 6)		32,340,000		32,340,000
Additional paid-in capital		445,885,000		432,360,000
Retained earnings (Note 4)		667,694,000		496,265,000
Equity in unrealized depreciation on marketable equity securities of unconsolidated subsidiaries (Note 10)		(5,643,000)		_
		1,140,792,000		961,481,000
Less treasury stock, at cost (Note 6)		457,595,000		466,007,000
Total shareholders' equity		683,197,000		495,474,000
	\$	1,420,140,000	\$1	,207,545,000
	=			

### **Consolidated Statements of Changes in Financial Position**

For the Years Ended December 31, 1977 and 1976

Working Capital was Provided by:  Net income  Equity in net income of unconsolidated subsidiaries before allocated interest expense and income tax items (Note 10)  Depreciation and amortization of property and equipment	1977 \$194,082,000	1976
Net income	\$194,082,000	A100 F00 C00
Net income	\$194,082,000	\$100 BOO 000
		\$136,799,000
Depresentian and amountization of avenants and agricument	(31,673,000)	(10, 319, 000)
Depreciation and amortization of property and equipment	48,239,000	47,282,000
Other amortization and charges not affecting working capital	2,532,000	6,128,000
Change in deferred income taxes	(7,800,000)	10,200,000
Working capital provided from operations	205,380,000	190,090,000
Increase in long-term debt	7,804,000	4,512,000
Dispositions of property and equipment	2,766,000	9,043,000
and option plans and the exercise of warrants	1,014,000	4,204,000
Conversion of 31/2% subordinated debentures	_	21,381,000
Other, net	5,532,000	(4,225,000)
	222,496,000	225,005,000
Working Capital was Applied to:		
Investments in and advances to unconsolidated subsidiaries	71,588,000	9,728,000
Additions to property and equipment	60,404,000	37,255,000
Reduction in long-term debt	11,205,000	61,012,000
Dividends on preferred stock	1,739,000	2,365,000
Acquisition of treasury stock		166,947,000
	144,936,000	277,307,000
Increase (Decrease) in Working Capital	\$ 77,560,000	\$ (52,302,000)
Working Capital Increase (Decrease):	0 0 110 000	0 1 004 000
	\$ 2,412,000	\$ 1,824,000
Marketable securities	51,918,000	20,689,000
Receivables	41,321,000	40,840,000
Inventories	16,893,000 (408,000)	(4,710,000) (919,000)
Prepaid expenses	(844,000)	(22,757,000)
Accrued liabilities	(15,449,000)	(8,613,000)
	(15,449,000) (17,800,000)	(78,800,000)
Accrued income taxes	(483,000)	144,000
Carrons barrons or roug octili dear this this transfer that the same of the sa	\$ 77,560,000	\$ (52,302,000)

The accompanying notes are an integral part of these statements.

### Consolidated Statements of Capital Stock, Additional Paid-In Capital and Treasury Stock

For the Years Ended December 31, 1977 and 1976

	Preferred Stock (\$1 Par Value)	Common Stock (\$1 Par Value)	Additional Paid-In Capital	Treasury Stock
Balance, December 31, 1975	\$516,000	\$32,340,000	\$407,689,000	\$318,080,000
Stock issuance:	, - ,	,,	, ,	, , ,
Conversion of 31/2% subordinated				
debentures (445,730 shares)	_	_	12,656,000	(8,725,000)
Common stock dividend			, ,	
(347,130 shares)	_	_	10,790,000	(6,836,000)
Stock option and purchase plans				
(163,720 shares)	_	_	972,000	(3,227,000)
Exercise of warrants (11,150 shares)	_	_	258,000	(227,000)
Conversion of \$6 series preferred				
stock (273 common shares issued)		_	(5,000)	(5,000)
Acquisition of common (3,161,929 shares)				
and preferred stock (209,212 shares)	_		_	166,947,000
Balance, December 31, 1976	516,000	32,340,000	432,360,000	466,007,000
Stock issuance:				
Common stock dividend (342,836 shares) .	_	_	13,633,000	(7,290,000)
Stock option plan				
(48,172 shares—Note 5)	_	_	(200,000)	(1,023,000)
Exercise of warrants				
(4,393 shares—Note 5)	_	_	96,000	(95,000)
Conversion of \$6 series preferred				
stock (212 common shares issued)	_		(4,000)	(4,000)
Balance, December 31, 1977	\$516,000	\$32,340,000	\$445,885,000	\$457,595,000

The accompanying notes are an integral part of these statements.

### **Auditors' Report**

To the Shareholders and Board of Directors, Teledyne, Inc.:

We have examined the consolidated balance sheets of Teledyne, Inc. (a Delaware corporation) and subsidiaries as of December 31, 1977 and 1976, and the related statements of income, capital stock, additional paid-in capital and treasury stock, retained earnings and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. The consolidated financial statements of Unicoa Corporation and subsidiaries were examined by other auditors whose reports thereon have been furnished to us. Our opinion expressed herein, insofar as it relates to the amounts included for Unicoa Corporation and subsidiaries, is based solely upon the reports of the other auditors. Teledyne's investment in Unicoa was 18 percent in 1977 and 19 percent

in 1976 of consolidated assets and its equity in Unicoa's net income, after allocated interest expense and income tax items as described in Note 10, was 7 percent in 1977 and 12 percent in 1976 of consolidated net income.

In our opinion, based upon our examinations and the reports of other auditors referred to above, the accompanying consolidated financial statements present fairly the consolidated financial position of Teledyne, Inc. and subsidiaries as of December 31, 1977 and 1976, and the results of their operations and changes in their financial position for the years then ended, all in conformity with generally accepted accounting principles consistently applied during the periods.

ARTHUR ANDERSEN & CO.

Los Angeles, California, January 15, 1978.

(1) Summary of Significant Accounting Policies. Principles of Consolidation. The consolidated financial statements of Teledyne, Inc. include the accounts of all its subsidiaries except its insurance and finance subsidiaries. The investments in unconsolidated subsidiaries, which include advances, are accounted for by the equity method. All material intercompany accounts and transactions have been eliminated. Certain amounts in the 1976 consolidated financial statements have been reclassified to conform with the 1977 presentation.

Currency Translation. All assets and liabilities of foreign subsidiaries and other foreign currency assets and liabilities are translated at current rates with the exception of inventories, property and equipment and prepaid expenses which are translated at historical rates. Net translation gains and losses are included in operations in the period in which they occur.

Inventories. Inventories are stated at the lower of cost (last-in, first-out and first-in, first-out methods) or market, less progress payments received. Costs include direct material and labor costs and applicable manufacturing and engineering overhead. Sales and related costs are recorded as products are delivered and as services are performed, including products and services under long-term contracts. Costs of products delivered and services performed under such long-term contracts are removed from inventory and charged to cost of sales at amounts approximating actual cost. Any foreseeable losses are charged to income when determined.

Depreciation and Amortization. Buildings and equipment are depreciated on straight-line and declining balance bases. Estimated useful lives are 5 to 45 years for buildings, and 3 to 20 years for machinery and equipment. Leasehold improvements and patents are amortized on a straight-line basis over the life of the lease or patent. Maintenance and repairs are charged against income as incurred and betterments and major renewals are capitalized. Cost and accumulated depreciation of property sold or retired are removed from the accounts and the resultant gain or loss is included in income.

Cost in Excess of Net Assets of Purchased Businesses. Except for an immaterial amount being amortized, cost in excess of net assets of purchased businesses relates to businesses purchased prior to October 31, 1970 and is not being amortized.

Research and Development. Company funded research and development costs are expensed as incurred. Costs related to customer funded research and development contracts are charged to income as sales are recorded.

Pension Expense. Pension expense is accrued at amounts equal to normal cost plus a portion of prior service costs.

Income Taxes. Provision for income taxes includes state, Federal and foreign income taxes. Deferred income taxes are provided for timing differences in the recognition of income and expenses, income of the domestic international sales corporation not currently taxed, and undistributed earnings of subsidiaries, except for a portion of the earnings arising from life insurance operations. Investment tax credits are amortized over the estimated lives of the related assets.

Other Investments. Investments held by Teledyne's unconsolidated subsidiaries are accounted for by the equity method in the Company's consolidated financial statements when the aggregate voting percentage has exceeded 20 percent for one full quarter. The most recent publicly available financial statements of each investee company are used in determining Teledyne's voting percentage and share of earnings.

(2) Net Income Per Share. Primary net income per share is based on the weighted average number of shares of common stock and common stock equivalents outstanding during each year, including all convertible debt and dilutive options and warrants. Each common stock equivalent has been considered outstanding from the beginning of each year or date of issuance, and any related interest has been eliminated. Fully diluted net income per share includes the potential dilution of the \$6 series convertible preferred stock and the maximum potential dilution of outstanding options and warrants. The average shares of common stock used in the calculation of net income per share were as follows:

	1977	1976
Primary	11,848,300	12,686,797
Fully diluted	12,241,010	13,216,645
(3) Inventories. At December 31, 1977 and 1976, the Company's inventories	were as follows:	1976
Last-in, first-out method	\$188,689,000 38,118,000	\$170,038,000 34,871,000
Less progress billings	226,807,000 65,640,000	204,909,000 60,635,000
	\$161,167,000	\$144,274,000

Inventories related to long-term contracts were \$60,320,000 and \$52,288,000 at December 31, 1977 and 1976, respectively. Progress payments related to long-term contracts were \$58,656,000 and \$53,651,000 at December 31, 1977 and 1976, respectively.

Inventories stated on a last-in, first-out basis were \$116,271,000 and \$102,856,000 less than their first-in, first-out values at December 31, 1977 and 1976, respectively. During 1977 and 1976, inventory usage resulted in liquidations of last-in, first-out inventory quantities. These inventories were carried at the lower costs prevailing in prior years as compared with the cost of current purchases. The effect of these last-in, first-out inventory liquidations was to increase net income by approximately \$3,364,000, or \$0.28 per share (\$0.27 fully diluted), in 1977 and by approximately \$4,725,000, or \$0.37 per share (\$0.36 fully diluted), in 1976.

(4) Long-Term Debt. At December 31, 1977, the Company's long-term debt was as follows:	
10% Subordinated Debentures, due 2004, Series A, \$5,452,000 payable annually com-	¢ 70 600 000
mencing in 1994 (net of unamortized discount of \$30,356,000)	\$ 78,682,000
7½% Term Notes, due 1982, \$15,000,000 payable annually commencing in 1979	75,000,000
74% Bonds, payable in German Marks (called for redemption on April 1, 1978)	44,242,000
7% Subordinated Debentures, due 1999, \$1,871,000 payable annually commencing in	
1989	36,077,000
71/8% Sinking Fund Debentures, due 1994, \$1,400,000 payable annually	22,307,000
6½% Sinking Fund Debentures, due 1992, \$1,350,000 payable annually	19,589,000
7% Promissory Notes, due 1989, \$1,500,000 payable annually	18,250,000
6½% Subordinated Debentures, due 1983, \$7,453,000 payable annually commencing in 1979	11,066,000
Other (including \$8,391,000 secured by property and equipment), due in various installments to 1991	13,329,000
	318,542,000
Less current portion	5,192,000
	\$313,350,000

Long-term debt is payable \$5,192,000 in 1978, \$20,695,000 in 1979, \$24,871,000 in 1980, \$24,770,000 in 1981 and \$43,269,000 in 1982, after reduction for long-term debt repurchased to meet sinking fund requirements. Interest expense was \$29,954,000 in 1977 and \$31,260,000 in 1976, of which \$12,964,000 in 1977 and \$12,504,000 in 1976 was allocated to unconsolidated subsidiaries.

In order to meet current and future sinking fund requirements, the Company repurchased \$4,726,000 and \$18,389,000 face amount of its long-term debt in 1977 and 1976, respectively. In addition, in 1976, the Company redeemed its  $3\frac{1}{2}\%$  subordinated debentures. The resulting losses were included in the results of operations in selling and administrative expenses. These transactions resulted in a decrease in net income of \$500,000, or \$0.04 per share (\$0.04 fully diluted), in 1977 and \$1,181,000, or \$0.09 per share (\$0.09 fully diluted), in 1976. The Company has called for redemption on April 1, 1978 its  $7\frac{1}{4}\%$  Bonds payable in German Marks. The bonds will be redeemed at \$1,020, plus accrued interest, per bond.

Under various borrowing agreements, the Company has agreed to maintain minimum amounts of working capital and net worth, and has agreed to certain restrictions with respect to borrowing, purchase and sale of assets and capital stock and payment of dividends. At December 31, 1977, these agreements were complied with, and retained earnings of \$289,507,000 were not restricted by these agreements as to payment of dividends.

(5) Stock Options and Warrants. At December 31, 1977, 530 shares of common stock were reserved for issuance under outstanding options at \$19 per share (options for 265 shares were exercisable) and 576,192 shares of common stock were reserved for the granting of additional options. At December 31, 1976, 48,905 shares of common stock were reserved for issuance under outstanding options and 576,170 shares of common stock were reserved for the granting of additional options. During 1977, no options were granted, options to purchase 48,172 shares were exercised and none were cancelled.

At December 31, 1977, 118,148 shares of common stock were reserved for issuance under warrants, each of which provides for the purchase of 11.87 shares of common stock at \$42.15 per share until October, 1978.

(6) Capital Stock. At December 31, 1977 and 1976, the Company's capital stock consisted of the following shares:

	Authorized	1977	1976
Cumulative, convertible preferred stock,			
\$1 par value—\$6 series	15,000,000		
Issued		515,774	515,932
Outstanding		289,862	290,020
Common stock, \$1 par value			
Issued		32,339,685	32,339,685
Outstanding		11,813,617	11,418,004

At December 31, 1977 and 1976, the Company's treasury stock was as follows:

	1	977	1	976
	Shares	Cost	Shares	Cost
Cumulative convertible preferred stock— \$6 series	225,912 20,526,068	\$ 21,880,000 <u>435,715,000</u> \$457,595,000	225,912 20,921,681	\$ 21,880,000 <u>444,127,000</u> \$466,007,000

The 1976 financial statements and related notes, except for shareholders' equity, have been restated to reflect a 3 percent common stock dividend paid in May, 1977.

The holders of the \$6 series preferred stock are entitled to voting rights and cumulative annual dividends at the rate of \$6.00 per share. Such stock is redeemable at the Company's option at \$100.00 per share after April 22, 1978, and is convertible at any time into 1.34 shares of common stock. The Company has reserved 388,415 shares of common stock for conversion of these preferred shares. The excess of the liquidation preference of the preferred stock over par value does not impose any restrictions on retained earnings.

(7) Commitments and Contingencies. Five lawsuits have been filed in United States district courts in California, Michigan and Texas, alleging that the Company violated Federal securities laws and state laws in connection with certain repurchases or redemptions of its stock. The Company believes that the allegations made in these complaints are not meritorious and that the Company has in all instances adequate legal defenses. The claims seek money damages aggregating more than \$485,000,000, and punitive damages in excess of \$501,000,000. The Company has obtained judgments dismissing the three actions brought against it in California. The respective plaintiffs have filed or are expected to file notices of appeal. The other two actions are in the discovery stage.

The Company has guaranteed the repayment of principal and interest of certain short-term notes payable of UIC Investments, Inc., an unconsolidated subsidiary of the Company's life and casualty insurance subsidiaries. The amount of notes payable outstanding at December 31, 1977 covered by these guarantees was \$120,000,000.

(8) Other Costs and Expenses. Total pension expense was \$33,153,000 and \$31,215,000 in 1977 and 1976, respectively. The Company contributes accrued pension expense on a current basis. As of December 31, 1977, the actuarially computed value of vested benefits exceeded the total of the pension fund assets and balance sheet accruals by approximately \$76,000,000. The actuarially computed value of prior service costs exceeded such assets and accruals by approximately \$93,000,000.

Company funded research and development costs of \$28,900,000 and \$24,600,000 were charged to costs and expenses in 1977 and 1976, respectively.

In 1976, \$3,702,000 of cost in excess of net assets of purchased businesses was charged to income since such excess represented no further value to the Company.

(9) Income Taxes. The provisions for income taxes for the years ended December 31, 1977 and 1976 were as follows:

	1977	1976
Federal	\$133,600,000	\$106,500,000
State	20,000,000	13,700,000
Foreign	6,200,000	2,800,000
	\$159,800,000	\$123,000,000

 Such provisions consisted of the following:

 1977
 1976

 Current
 \$154,500,000
 \$116,200,000

 Deferred
 7,200,000
 8,400,000

 Investment tax credits
 (1,900,000)
 (1,600,000)

 \$159,800,000
 \$123,000,000

Deferred taxes arise principally as a result of the income of the domestic international sales corporation and deferred investment tax credits. The effective tax rate differs from the statutory U.S. Federal income tax rate of 48 percent principally due to state and local income taxes.

(10) Investments in Unconsolidated Subsidiaries. Equity in net income of unconsolidated subsidiaries, after allocated interest expense and income tax items, for the years ended December 31, 1977 and 1976, was as follows:

-000 TO	1977	1976
Equity in net income (loss) of:  Life insurance companies	\$23,401,000 8,272,000	\$20,634,000 (10,315,000)
	31,673,000	10,319,000
Allocated interest expense	(12,964,000)	(12,504,000)
Income tax credits	28,842,000	26,571,000
Provision for deferred taxes on equity in		
net income of investments (Note 15)	(5,306,000)	(842,000)
	\$42,245,000	\$23,544,000

The Company's investment in life insurance companies consists primarily of a 95.3 percent ownership in Unicoa Corporation (Note 11). The Company's investment in casualty insurance companies consists primarily of the investment in domestic casualty insurance companies (Note 12), principally Argonaut Insurance Company and Trinity Universal Insurance Company; these subsidiaries are wholly-owned as to voting securities. Included in the equity in net income (loss) of the life and casualty insurance companies are amounts representing the incremental effect of accounting for certain investments by the equity method (Note 15).

The income tax credits consist of amounts (\$6,612,000 in 1977 and \$6,377,000 in 1976) related to the allocated interest expense and amounts (\$24,253,000 in 1977 and \$20,194,000 in 1976) related to losses of unconsolidated subsidiaries which are recoverable in Teledyne's consolidated tax return but which are not available to the unconsolidated subsidiaries on a separate return basis, reduced in 1977 by a provision (\$2,023,000) for taxes which will become due upon distribution of the earnings of the unconsolidated subsidiaries. The effective tax rate used in computing the income tax credits related to losses of unconsolidated subsidiaries differs from the statutory U.S. Federal income tax rate of 48 percent principally because of tax exempt investment income.

Interest expense was allocated to unconsolidated subsidiaries based on the ratio of the Company's average investment in unconsolidated subsidiaries to average total capital.

The Company's equity in the net assets of its unconsolidated subsidiaries, including advances, was \$217,258,000 in 1977 and \$135,115,000 in 1976, including its equity of \$138,036,000 and \$80,687,000, respectively, in their retained earnings. In consolidation, a portion of the difference between the Company's investments in purchased subsidiaries and the book value of their assets has been allocated to bonds and stocks and amortized over the applicable maturity of the bonds or charged or credited to income upon their disposition. The Company's investment exceeded its equity in net assets by \$196,798,000 in 1977 and \$196,644,000 in 1976. Such excess is in addition to the excess shown in the consolidated balance sheets and is not being amortized since, in the opinion of management, there has been no diminution in its value. The Company's equity in net income (loss) of its unconsolidated subsidiaries includes losses on sales of investments of \$1,402,000 in 1977 and \$6,874,000 in 1976.

The Company's unconsolidated subsidiaries carry marketable equity securities, including those accounted for by the equity method in the consolidated financial statements of Teledyne, at the lower of aggregate cost or market. The Company's equity in the gross unrealized gains and the gross unrealized losses, which are not included in the determination of the results of operations, was \$27,051,000 and \$31,015,000, respectively, at December 31, 1977, after adjusting for the effect of the use of the equity accounting method for certain investments. The reduction to the lower of cost or market is reflected in the consolidated financial statements as a reduction in the investments in unconsolidated subsidiaries and in shareholders' equity. Changes in unrealized depreciation have no effect on net income.

(11) Unicoa Corporation and Subsidiaries. The following condensed statements summarize the consolidated financial position and operating results of Unicoa Corporation and subsidiaries. Unicoa Corporation was 95.3 percent owned by Teledyne at December 31, 1977 and 1976.

### **Consolidated Balance Sheets**

	December 31,	
	1977	1976
Assets:		
Investments:		
Bonds and notes, at amortized cost (market: 1977—\$305,782,000; 1976—\$238,879,000)	\$306,519,000	\$242,885,000
Stocks, principally at lower of aggregate cost or market (market: 1977—\$238,545,000; 1976—\$232,311,000)	233,092,000	214,333,000
Mortgage loans on real estate, less reserve of \$6,990,000 in 1977 and \$6,120,000 in 1976	109,413,000	121,077,000
Real estate, at cost less accumulated depreciation	41,698,000	46,350,000
Loans to policyholders	16,791,000	15,548,000
Invested cash	136,000	1,960,000
Total investments	707,649,000	642,153,000
Cash	3,330,000	2,756,000
Uncollected premiums	25,507,000	22,744,000
Deferred policy acquisition costs	115,032,000	110,290,000
Cost in excess of net assets of purchased businesses	25,796,000	26,234,000
Other assets	17,407,000	23,362,000
Other assets	\$894,721,000	\$827,539,000
Liabilities:		
Policy reserves and liabilities	\$631,192,000	\$595,088,000
Notes payable to banks	22,200,000	16,300,000
Mortgage loan payable	6,626,000	7,466,000
Subordinated debentures	18,340,000	18,142,000
Other liabilities	64,651,000	55,950,000
Shareholders' equity	151,712,000	134,593,000
	\$894,721,000	\$827,539,000
Consolidated Statements of Income		5 L W
	Year Ended	
	1977	1976
Income:		
Premiums and other insurance income	\$269,076,000	\$262,667,000
Net investment income	33,419,000	34,565,000
Other income	3,701,000	5,817,000
	306,196,000	303,049,000
Expenses:	140 012 000	100 001 000
Benefits paid or provided	148,213,000	162,661,000
Insurance expenses	134,361,000	111,777,000
Provision for income taxes	3,575,000	5,597,000
	286,149,000	280,035,000
Loss on Sale of Investments (excludes unrealized depreciation on	20,047,000	23,014,000
marketable equity securities of \$12,587,000 in 1977 and		
unrealized appreciation of \$28,935,000 in 1976)	(2,132,000)	(3,125,000)
Net Income	\$ 17,915,000	\$ 19,889,000

The above statements have been prepared on the basis of generally accepted accounting principles which differ from statutory insurance accounting practices. Life insurance premiums are recognized as revenue when they become due, and revenues, benefits and expenses on accident and health insurance are recognized over the period to which the premiums relate. Deferred taxes are provided for timing differences in the recognition of income and expense.

Marketable equity securities, including those accounted for by the equity method in the consolidated financial statements of Teledyne, are carried at the lower of aggregate cost or market. Any valuation allowance necessary to reduce these securities from cost to market, if lower in the aggregate, is reflected in the consolidated financial statements as a reduction in shareholders' equity; any changes thereto have no effect on net income. The net unrealized appreciation was \$5,141,000 at December 31, 1977 and \$17,728,000 at December 31, 1976. Shareholders' equity has been reduced by \$796,000 at December 31, 1977 representing the equity in the unrealized depreciation on marketable equity securities held by UIC Investments, Inc., a 20 percent owned unconsolidated subsidiary.

A portion of life insurance income is not subject to Federal income tax until such amount exceeds certain limitations or is distributed to shareholders as dividends. At December 31, 1977, up to \$55,000,000 (at current tax rates) would be required for possible Federal income taxes which might become due, in whole or in part, in future years if any portion of \$114,000,000 of the gains from operations since January 1, 1959 (which includes \$3,000,000 from both 1977 and 1976) becomes includable in taxable income as a result of such limitations, including distributions in excess of \$24,800,000 as dividends.

(12) Domestic Casualty Insurance Subsidiaries. The following condensed statements summarize the combined financial position and operating results of the domestic casualty insurance subsidiaries, all of which are wholly-owned by Teledyne as to voting securities.

### **Combined Balance Sheets**

Combined Balance Sneets	December 31,		
	1977	1976	
Assets:			
Investments:			
Bonds, at amortized cost (market: 1977—\$394,163,000; 1976—\$394,084,000)	\$388,261,000	\$401,955,000	
(market: 1977—\$322,188,000; 1976—\$311, 594,000)	320,152,000	293,492,000	
Invested cash	168,313,000	26,636,000	
Total investments	876,726,000	722,083,000	
Cash	21,187,000	18,172,000	
Agents' balances and uncollected premiums	45,885,000	45,011,000	
Other receivables	26,305,000	32,803,000	
Deferred policy acquisition costs	13,118,000	11,975,000	
Property and equipment, at cost less accumulated depreciation	4,152,000	4,392,000	
Cost in excess of net assets of purchased businesses	4,783,000	4,783,000	
	\$992,156,000	\$839,219,000	
Liabilities:	-		
Loss and claim reserves	\$622,287,000	\$574,152,000	
Accrued loss adjustment expenses	103,506,000	97,938,000	
Unearned premiums	101,571,000	90,968,000	
Other liabilities	49,270,000	36,572,000	
Shareholders' equity	115,522,000	39,589,000	
	\$992,156,000	\$839,219,000	

	Year Ended December 31,		
	1977	1976	
Income:			
Net premiums earned	\$365,927,000	\$331,257,000	
Net investment income	40,768,000	38,316,000	
	406 695 000	369 573 000	

### Expenses:

**Combined Statements of Operations** 

	408,053,000	376,407,000
Provision for income taxes	7,256,000	2,354,000
Underwriting expenses	105,306,000	94,112,000
Losses and loss adjustment expenses	295,491,000	279,941,000

(6,834,000)

(1,358,000)

### Gain (Loss) on Sale of Investments (excludes unrealized

Net Loss	 (728 000)	\$ (10.969.000)
\$16,045,000 in 1976)	630,000	(4,135,000)
\$16,620,000 in 1977 and unrealized appreciation of		
depreciation on marketable equity securities of		

The above statements have been prepared on the basis of generally accepted accounting principles which differ from statutory insurance accounting practices. The principal subsidiaries included in the combined financial statements are Argonaut Insurance Company and Trinity Universal Insurance Company. Premium income, policy acquisition costs, and policyholder dividends are recognized ratably over the period to which the premiums relate. Losses and loss adjustment expenses are provided at the estimated amounts necessary to settle incurred claims. Deferred taxes are provided for timing differences in the recognition of income and expenses to the extent such deferred taxes are determined to be recoverable. In 1976, \$3,806,000 of cost in excess of net assets of purchased businesses was charged to operations since such excess represented no further value to the Company.

Marketable equity securities, including those accounted for by the equity method in the consolidated financial statements of Teledyne, are carried at the lower of aggregate cost or market. Any valuation allowance necessary to reduce these securities from cost to market, if lower in the aggregate, is reflected in the combined financial statements as a reduction in shareholders' equity; changes thereto have no effect on the results of operations. The net unrealized depreciation on marketable equity securities was \$1,248,000 at December 31, 1977, and the net unrealized appreciation was \$15,372,000 at December 31, 1976.

Investments in stocks includes \$34,177,000 in 1977 and \$40,032,000 in 1976 of investments in the common stock of unconsolidated subsidiaries accounted for by the equity method. Shareholders' equity has been reduced by \$3,183,000 representing the equity in the unrealized depreciation on marketable equity securities held by UIC Investments, Inc., an 80 percent owned subsidiary accounted for by the equity method. Shareholders' equity includes \$20,000,000 of certificates of contribution issued in 1975 to Teledyne in exchange for \$20,000,000 of Teledyne's 10% subordinated debentures (included in bonds in the above combined balance sheets).

Taxable income of the domestic casualty insurance subsidiaries is included in the consolidated income tax return of Teledyne. Certain of the subsidiaries reimburse Teledyne for their portion of Teledyne's consolidated Federal income tax liability. No income tax credits have been included in the domestic casualty combined financial statements since the losses for tax purposes could not be carried back to recover prior years' taxes on a separate return basis.

(13) UIC Investments, Inc. The following condensed statements summarize the financial position and operating results of UIC Investments, Inc. UIC Investments, Inc. is 80 percent owned by Trinity Universal Insurance

Company and 20 percent owned by a wholly-owned subsidiary of Unicoa Corporation.

<b>Balance</b>	Sheets
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	December 31,		
Assets:	1977	1976	
Investments in common stock, at the lower of aggregate cost			
or market (cost: 1977—\$170,548,000; 1976—\$97,814,000)	\$166,569,000	\$ 97,021,000	
Short-term investments, at cost which approximates market	2,700,000	13,560,000	
Cash	92,000	210,000	
Accrued investment income	356,000	418,000	
	\$169,717,000	\$111,209,000	
Liabilities:			
Notes payable to banks	\$120,000,000	\$ 55,000,000	
Accounts payable	2,971,000	4,974,000	
Accrued interest	993,000	439,000	
Notes payable to affiliates	51,035,000	47,200,000	
Shareholders' equity (deficit)	(5,282,000)	3,596,000	
	\$169,717,000	\$111,209,000	
Statements of Operations			
	Year Ended I	December 31,	
	1977	1976	
Investment income	\$ 3,762,000	\$ 974,000	
Interest expense	9,517,000	1,554,000	
Other expenses	122,000	31,000	
Gain on sale of investments	185,000		
Net Loss	\$ (5,692,000)	\$ (611,000)	

Short-term investments are carried at cost, which approximates market. Investments in common stocks, including those accounted for by the equity method in the consolidated financial statements of Teledyne, are carried at the lower of aggregate cost or market. Any valuation allowance necessary to reduce common stocks from cost to market, if lower in the aggregate, is reflected in the financial statements as a reduction in shareholders' equity; changes thereto have no effect on the results of operations. The net unrealized depreciation on common stocks was \$3,979,000 at December 31, 1977 and \$793,000 at December 31, 1976.

Taxable income of UIC Investments, Inc. is included in the consolidated tax returns of Teledyne. No income tax credits have been included in the financial statements of UIC Investments, Inc. since the losses for tax purposes could not be used on a separate return basis.

(14) Fireside Securities Corporation and Subsidiaries. The following condensed statements summarize the consolidated financial position and operating results of Fireside Securities Corporation and subsidiaries. Fireside Securities Corporation is a wholly-owned subsidiary of Argonaut Insurance Company.

Consolidated Balance Sheets	December 31.		
	1977 1976		
Assets:			
Cash	\$ 2,744,000	\$ 1,979,000	
Bonds, at amortized cost (market: 1977—\$8,748,000;			
1976—\$18,705,000)	8,775,000	19,119,000	
Loans receivable	133,117,000	117,211,000	
Premises and equipment, at cost less accumulated depreciation	1,533,000	1,262,000	
Other assets	839,000	1,829,000	
	\$147,008,000	\$141,400,000	
Liabilities:		-	
Investment certificates	\$124,464,000	\$116,739,000	
Amounts due Teledyne, Inc.	_	5,458,000	
Other liabilities	3,015,000	1,470,000	
Shareholder's equity	19,529,000	17,733,000	
	\$147,008,000	\$141,400,000	

### Consolidated Statements of Income

	Year Ended December 31,		
	1977	1976	
Revenues:			
Interest on loans	\$ 23,461,000	\$ 20,413,000	
Other income	3,914,000	3,438,000	
	27,375,000	23,851,000	
Expenses:			
Interest on investment certificates	8,040,000	7,752,000	
General and administrative	13,287,000	11,013,000	
Provision for losses on loans receivable	2,810,000	1,482,000	
Provision for income taxes	1,442,000	1,408,000	
	25,579,000	21,655,000	
Net Income	\$ 1,796,000	\$ 2,196,000	

The consolidated financial statements of Fireside Securities Corporation include the accounts of all its subsidiaries. Loans receivable are stated net of unearned discount. Deferred income taxes are provided for timing differences in the recognition of income and expenses.

Taxable income of Fireside Securities Corporation and its subsidiaries is included in the consolidated income tax return of Teledyne.

(15) Other Equity Investments. During 1977, the Company adopted the equity method of accounting for certain investments owned by its unconsolidated subsidiaries. The consolidated financial statements for 1976 have been restated to reflect the effects of the use of equity accounting. The incremental effect of the use of this method was to increase equity in net income of unconsolidated subsidiaries and net income by \$10,436,000, or \$0.88 per share (\$0.86 fully diluted), in 1977 and by \$1,920,000, or \$0.16 per share (\$0.14 fully diluted), in 1976. Investments accounted for by the equity method, and approximate voting percentages based on the most recent publicly available data, were: Brockway Glass Company, Inc. (22 percent), Curtiss-Wright Corporation (28 percent) and Litton Industries, Inc. (22 percent).

Teledyne's equity in the aggregate carrying value of these investments was \$217,952,000 and \$138,041,000 at December 31, 1977 and 1976, respectively. The aggregate market value of these investments, based on quoted market prices, was \$203,785,000 at December 31, 1977. Teledyne's equity in the net income of these companies, after income taxes, was \$12,879,000 in 1977 and \$5,264,000 in 1976; these amounts include dividends received by Teledyne's unconsolidated subsidiaries. Income taxes have been provided at appropriate rates for that portion of the equity in net income received as dividends and at capital gains rates on the balance.

Teledyne's aggregate equity in the net assets of these companies exceeded the carrying value of the investments by approximately \$18,000,000. Of this amount, approximately \$5,000,000 has been considered to be related to cost in excess of net assets of purchased businesses reported in the financial statements of the investee companies; the remaining balance is not being amortized.

(16) Business Segments. The Company's major business segments include industrial products, aviation and electronic products, specialty metals and consumer products. Internal combustion engines are the major product of the industrial segment, including the manufacture of air and water cooled, gasoline and diesel fueled engines. Other products in this segment include machine tools, dies and consumable tooling. Aviation and electronic products include aircraft engines, remotely piloted vehicles, drone systems, spacecraft and avionics. This segment also includes semiconductors, relays, aircraft monitoring and control systems, military electronic equipment and other related products and systems. Specialty metal products include zirconium, high speed and alloy steels, tungsten and molybdenum. Other operations in this segment include processing, casting, rollforming and forging metals into a variety of finished forms. The consumer segment includes oral hygiene products, shower massages, home smoke alarms, high fidelity speakers and other products and services.

The Company's unconsolidated subsidiaries are primarily insurance companies. One group writes life and health and accident insurance. Another group writes a broad line of casualty insurance including workers' compensation, liability, automobile, homeowners and fire insurance. Business is done primarily in the United States.

Sales between business segments, which were not material, generally were priced at prevailing market prices. In 1977, the Company's sales to the U.S. Government were \$519,317,000, including direct sales as prime contractor and indirect sales as subcontractor; the industrial and aviation and electronics segments made most of these sales. Sales by operations in the United States to customers in other countries were \$193,963,000 in 1977.

Information on the Company's business segments for the year ended December 31, 1977 is as follows:

Aviation and electronics 491,096,000 Specialty metals 600,828,000 Consumer 303,357,000 Total Consolidated Sales 2,209,731,000 Insurance and finance revenues 750,706,000 Total Revenues \$2,960,437,000  Operating Profit Industrial \$134,399,000 Aviation and electronics 67,994,000 Specialty metals 67,994,000 Specialty metals 81,872,000 Consumer 49,538,000 Total Operating Profit 333,803,000 Corporate expense 15,953,000 Interest expense 16,990,000 Interest expense 16,990,000 Consolidated Income Before Income Taxes \$311,637,000  Equity In Net Income of Unconsolidated Subsidiaries Equity in net income of: Life insurance companies \$23,401,000 Casualty insurance companies 8,272,000 Allocated interest expense 112,964,000 Income tax credits 228,842,000	A V D		
Total Consolidated Sales         2,209,731,000           Insurance and finance revenues         750,706,000           Total Revenues         \$2,960,437,000           Operating Profit         \$134,399,000           Industrial         \$1,972,000           Aviation and electronics         \$67,994,000           Specialty metals         \$18,872,000           Consumer         49,538,000           Total Operating Profit         333,803,000           Corporate expense         16,990,000           Interest expense         16,990,000           Interest income         (10,777,000           Consolidated Income Before Income Taxes         \$311,637,000           Equity in Net Income of Unconsolidated Subsidiaries         Equity in net income of:           Life insurance companies         \$23,401,000           Casualty insurance companies         \$23,401,000           Casualty insurance companies         \$28,422,000           Income tax credits         \$28,842,000           Provision for deferred taxes on equity in net income of investments         \$2,300,000           Aviation and electronics         \$9,173,000           Specialty metals         \$2,0,300,000           Aviation and electronics         \$2,766,000           General corporate	Industrial	\$	814,450,000 491,096,000 600,828,000
Insurance and finance revenues         750,706,000           Total Revenues         \$2,960,437,000           Operating Profit         ***           Industrial         \$134,399,000           Specialty metals         \$1,872,000           Consumer         49,538,000           Total Operating Profit         333,803,000           Corporate expense         15,953,000           Interest expense         16,990,000           Interest income         (10,777,000           Equity in Net income of Unconsolidated Subsidiaries         Equity in net income of:           Life insurance companies         \$23,401,000           Casualty insurance companies         \$23,401,000           Allocated interest expense         \$22,200           Income tax credits         \$28,422,000           Provision for deferred taxes on equity in net income of investments         \$20,300,000           Aviation and Amortization Expense         Industrial         \$20,300,000           Aviation and electronics         \$1,642,000           Specialty metals         \$25,6601,000           Consumer         \$25,6601,000           General corporate         \$25,000,000           Aviation and electronics         \$25,661,000           Specialty metals         \$25,661		_	
Deperating Profit	Total Consolidated Sales	2	
Industrial         \$ 134,399,000           Aviation and electronics         67,994,000           Specialty metals         81,872,000           Consumer         49,538,000           Total Operating Profit         333,803,000           Corporate expense         15,953,000           Interest expense         16,990,000           Interest income         (10,777,000           Consolidated Income Before Income Taxes         \$ 311,637,000           Equity In Net Income of Unconsolidated Subsidiaries         Equity in net income of:           Life insurance companies         \$ 23,401,000           Casualty insurance companies         \$ 23,401,000           Casualty insurance companies         \$ 22,842,000           Income tax credits         28,842,000           Provision for deferred taxes on equity in net income of investments         (5,306,000)           Provision for deferred taxes on equity in net income of investments         9,179,000           Specialty metals         \$ 20,300,000           Aviation and electronics         \$ 14,322,000           Consumer         \$ 2,796,000           General corporate         \$ 265,601,000           Total Depreciation and Amortization Expense         \$ 265,601,000           Identifiable Assets         \$ 265,601,000     <	Total Revenues	\$2	2,960,437,000
Total Operating Profit         333,803,000           Corporate expense         15,553,000           Interest expense         16,990,000           Interest income         (10,777,000           Consolidated Income Before Income Taxes         \$ 311,637,000           Equity in Net Income of Unconsolidated Subsidiaries         Equity in net income of:           Life insurance companies         \$ 23,401,000           Casualty insurance companies         \$ 23,272,000           Allocated interest expense         (12,964,000)           Income tax credits         28,842,000           Provision for deferred taxes on equity in net income of investments         (5,306,000)           Provision and Amortization Expense         \$ 20,300,000           Aviation and electronics         9,179,000           Specialty metals         14,322,000           Consumer         2,796,000           General corporate         1,642,000           Total Depreciation and Amortization Expense         \$ 48,239,000           Identifiable Assets         \$ 265,601,000           General corporate         209,342,000           Specialty metals         209,342,000           Consumer         99,874,000           General corporate assets         699,859,000           Investments	Industrial  Aviation and electronics  Specialty metals	\$	67,994,000 81,872,000
Equity in Net Income of Unconsolidated Subsidiaries         Equity in net income of:       32,401,000         Life insurance companies       8,272,000         Casualty insurance companies       31,673,000         Allocated interest expense       (12,964,000         Income tax credits       28,842,000         Provision for deferred taxes on equity in net income of investments       (5,306,000         Provision and Amortization Expense       9,179,000         Industrial       \$ 20,300,000         Aviation and electronics       9,179,000         Specialty metals       14,322,000         Consumer       2,796,000         General corporate       1,642,000         Identifiable Assets       125,042,000         Industrial       \$ 265,601,000         Aviation and electronics       125,042,000         Specialty metals       209,342,000         Consumer       99,874,000         General corporate assets       299,342,000         Consumer       99,874,000         Investments in unconsolidated subsidiaries:       252,080,000         Life insurance companies       252,080,000         Casualty insurance companies       252,080,000	Total Operating Profit  Corporate expense  Interest expense  Interest income		333,803,000 15,953,000
Equity in net income of:         \$ 23,401,000           Life insurance companies         \$ 23,401,000           Casualty insurance companies         \$ 2,72,000           Allocated interest expense         (12,964,000           Income tax credits         28,842,000           Provision for deferred taxes on equity in net income of investments         (5,306,000)           \$ 42,245,000           Depreciation and Amortization Expense         1           Industrial         \$ 20,300,000           Aviation and electronics         9,179,000           Specialty metals         14,322,000           Consumer         2,796,000           General corporate         1,642,000           Total Depreciation and Amortization Expense         \$ 48,239,000           Identifiable Assets         1           Industrial         \$ 265,601,000           Aviation and electronics         125,042,000           Specialty metals         209,342,000           Consumer         699,859,000           General corporate assets         699,859,000           Consumer         699,859,000           28,142,000           Investments in unconsolidated subsidiaries:         252,080,000           Life insurance companies         252,080,000  <	Consolidated Income Before Income Taxes	\$	311,637,000
Allocated interest expense       31,673,000         Income tax credits       28,842,000         Provision for deferred taxes on equity in net income of investments       (5,306,000)         \$ 42,245,000         Depreciation and Amortization Expense       ***         Industrial       \$ 20,300,000         Aviation and electronics       9,179,000         Specialty metals       14,322,000         Consumer       2,796,000         General corporate       1,642,000         Total Depreciation and Amortization Expense       \$ 48,239,000         Identifiable Assets       ***         Industrial       \$ 265,601,000         Aviation and electronics       125,042,000         Specialty metals       209,342,000         Consumer       99,874,000         General corporate assets       298,842,000         Investments in unconsolidated subsidiaries:       ***         Life insurance companies       252,080,000         Casualty insurance companies       180,059,000	Equity in net income of:  Life insurance companies	\$	23,401,000
Allocated interest expense       (12,964,000         Income tax credits       28,842,000         Provision for deferred taxes on equity in net income of investments       (5,306,000)         \$ 42,245,000         Depreciation and Amortization Expense       **         Industrial       \$ 20,300,000         Aviation and electronics       9,179,000         Specialty metals       14,322,000         Consumer       2,796,000         General corporate       1,642,000         Total Depreciation and Amortization Expense       \$ 48,239,000         Identifiable Assets       **         Industrial       \$ 265,601,000         Aviation and electronics       125,042,000         Specialty metals       209,342,000         Consumer       99,874,000         General corporate assets       288,142,000         Investments in unconsolidated subsidiaries:       282,080,000         Life insurance companies       252,080,000         Casualty insurance companies       180,059,000	Casualty insurance companies	_	8,272,000 31,673,000
Depreciation and Amortization Expense         \$ 20,300,000           Aviation and electronics         9,179,000           Specialty metals         14,322,000           Consumer         2,796,000           General corporate         1,642,000           Total Depreciation and Amortization Expense         \$ 48,239,000           Identifiable Assets         125,042,000           Industrial         \$ 265,601,000           Aviation and electronics         125,042,000           Specialty metals         209,342,000           Consumer         99,874,000           General corporate assets         288,142,000           Investments in unconsolidated subsidiaries:         288,142,000           Life insurance companies         252,080,000           Casualty insurance companies         180,059,000	Income tax credits		(12,964,000)
Industrial       \$ 20,300,000         Aviation and electronics       9,179,000         Specialty metals       14,322,000         Consumer       2,796,000         General corporate       1,642,000         Total Depreciation and Amortization Expense       \$ 48,239,000         Identifiable Assets       125,042,000         Industrial       \$ 265,601,000         Aviation and electronics       125,042,000         Specialty metals       209,342,000         Consumer       99,874,000         General corporate assets       288,142,000         Investments in unconsolidated subsidiaries:       252,080,000         Life insurance companies       252,080,000         Casualty insurance companies       180,059,000		\$	42,245,000
Identifiable Assets   \$265,601,000   Aviation and electronics   \$125,042,000   Specialty metals   \$209,342,000   \$209,342,000   \$209,874,000   \$699,859,000   \$699,859,000   \$288,142,000   \$288,142,000   \$288,142,000   \$252,080,00	Industrial Aviation and electronics Specialty metals Consumer	\$	9,179,000 14,322,000 2,796,000
Industrial .       \$ 265,601,000         Aviation and electronics .       125,042,000         Specialty metals .       209,342,000         Consumer .       99,874,000         General corporate assets .       288,142,000         Investments in unconsolidated subsidiaries:       252,080,000         Casualty insurance companies .       252,080,000         180,059,000		\$	48,239,000
Aviation and electronics			
General corporate assets	Aviation and electronics	\$	125,042,000 209,342,000
Casualty insurance companies	Investments in unconsolidated subsidiaries:		288,142,000
	Casualty insurance companies		, ,
		\$1	

Capital	Ex	penditures
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Industrial	\$ 28,410,000
Aviation and electronics	8,847,000
Specialty metals	16,927,000
Consumer	4,085,000
General corporate	2,135,000
Total Capital Expenditures	\$ 60,404,000

### (17) Selected Quarterly Financial Data (Unaudited).

		Quarter Ended									
	March 31	June 30	September 30	December 31							
1977 — Consolidated Sales	\$545,859,000	\$524,637,000	\$550,710,000	\$588,525,000							
Consolidated Gross Profit	\$139,626,000	\$132,472,000	\$146,665,000	\$166,055,000							
Income of Consolidated Companies Equity in Net Income (Loss)	\$ 34,198,000	\$ 31,446,000	\$ 38,682,000	\$ 47,511,000							
of Unconsolidated Subsidiaries	_12,123,000	(3,914,000)	17,342,000	16,694,000							
Net Income	\$ 46,321,000	\$ 27,532,000	\$ 56,024,000	\$ 64,205,000							
Average Shares Outstanding: Primary	11,846,719 12,235,311	11,857,426 12,257,751	11,842,448 12,230,863	11,846,610 12,240,119							
Primary	\$3.87	\$2.29	\$4.69	\$5.38							
Fully Diluted	\$3.79	\$2.25	\$4.58	\$5.25							
1976 — Consolidated Sales	\$459,950,000	\$481,877,000	\$480,993,000	\$514,736,000							
Consolidated Gross Profit	\$111,445,000	\$120,593,000	\$126,632,000	\$141,717,000							
Income of Consolidated Companies Equity in Net Income of	\$ 23,481,000	\$ 27,611,000	\$ 29,457,000	\$ 32,706,000							
Unconsolidated Subsidiaries	9,827,000	4,419,000	5,545,000	3,753,000							
Net Income	\$ 33,308,000	\$ 32,030,000	\$ 35,002,000	\$ 36,459,000							
Average Shares Outstanding: Primary Fully Diluted Net Income Per Share:	14,407,990 15,109,024	12,376,978 12,959,984	12,100,337 12,509,551	11,861,716 12,266,667							
Primary	\$2.27	\$2.54	\$2.86	\$3.04							
Fully Diluted	\$2.22	\$2.47	\$2.80	\$2.97							

During the quarter ended December 31, 1977 the Company restated the previously reported results of operations to reflect the effects of the use of equity accounting for certain investments. The effect was to increase equity in net income of unconsolidated subsidiaries and net income as follows:

Quarter Ended		Net Income Per Share					
	Amount	Primary	Fully Diluted				
September 30, 1977	\$3,239,000	\$0.27	\$0.26				
June 30, 1977	2,247,000	0.19	0.19				
March 31, 1977	2,205,000	0.18	0.18				
December 31, 1976	1,127,000	0.10	0.09				
September 30, 1976	635,000	0.06	0.05				
June 30, 1976	158,000	0.01	0.01				

During the quarter ended June 30, 1977, the combined operations of the Company's unconsolidated subsidiaries resulted in a loss. This was due primarily to adverse loss development in reinsurance assumed from other underwriters by Argonaut Insurance Company, one of Teledyne's domestic casualty insurance subsidiaries. Among the unconsolidated life insurance subsidiaries, earnings at United Insurance Company of America declined as a result of the provision of additional reserves on accident and health policies.

During the quarter ended December 31, 1976, the Company and an unconsolidated subsidiary charged to operations amounts representing costs in excess of net assets of purchased businesses since such amounts represented no further value to the companies. This resulted in a decrease in net income for the quarter of \$7,508,000.

(18) Supplemental Information on Replacement Cost (Unaudited). The impact of inflation on the costs of goods and services varied among the lines of business. The effects of such inflation, and the related effects on selling prices, are generally reflected in the results of operations over a relatively short period of time. The impact of inflation on the replacement cost of productive capacity, however, is usually more long-term in nature. In compliance with the rules of the Securities and Exchange Commission, the Company has calculated certain estimated replacement cost information for inventories, cost of sales, property and equipment and the related depreciation and amortization. This information will be presented in the Annual Report on Form 10-K of Teledyne, Inc. for the year ended December 31, 1977.

### **Stock Price and Dividend Summary**

	1976				1977			
Quarters	1st	2nd	3rd	4th	1st	2nd	Srd	4th
Common Stock*								
High	50%	661/s	781/8	75%	68	741/4	73%	$64\frac{1}{2}$
Low	20%	40%	64%	56%	$54\frac{1}{2}$	53%	47%	50
Dividend	3%	Stock Pai	d in May		3	% Stock Pa	aid in May	
Preferred Stock \$6 Cumulative Convertible Preferred Series								
High	853/4	105	115	1111/2	$102\frac{1}{2}$	107	105%	99%
Low	62	79	105	102	92	94	$94\frac{1}{4}$	94
Dividend	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50	\$1.50

<sup>\*</sup>Prices have been adjusted for common stock dividends paid through May 18, 1977. Teledyne Common Stock and \$6 Cumulative Convertible Preferred are listed on the New York and Pacific Coast Stock Exchanges.

### Review

### **Consolidated Summary of Operations**

For the four years ended December 31, 1977, and the year ended October 31, 1973 (000's omitted except average share and per share amounts)

				Ye	ar Ended				
			Decer	31,	71,			ctober 31,	
_	1977		1976		1975		1974		1973
\$2,209,731		\$1,937,556		\$1,714,972		\$1,699,987		\$1,455,499	
\$	584,818	\$	500,387	\$	391,269	\$	328,793	\$	284,661
\$	16,990	\$	18,756	\$	22,254	\$	22,561	\$	22,166
\$	159,800	\$	123,000	\$	85,300	\$	64,200	\$	39,400
\$	151,837 42,245	\$	113,255 23,544	\$	82,619 19,087	\$	62,826	\$	38,640 27,343
	194,082		136,799		101,706		31,505		65,983
	1,739		2,365		3,425		3,662		3,684
\$	192,343	\$	134,434	\$	98,281	\$	27,843	\$	62,299
						23	,772,430 N/A	28	,271,875 N/A
\$	16.23	8	310.63		\$5.74		\$1.23		\$2.26
\$	15.86	\$	310.36		\$5.68		N/A		N/A
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$2,209,731 \$ 584,818 \$ 16,990 \$ 159,800 \$ 151,837 42,245 194,082	\$2,209,731 \$1 \$ 584,818 \$ \$ 16,990 \$ \$ 159,800 \$ \$ 151,837 \$ 42,245 194,082 1,739 \$ 192,343 \$ 11,848,300 12 12,241,010 13	1977       1976         \$2,209,731       \$1,937,556         \$ 584,818       \$ 500,387         \$ 16,990       \$ 18,756         \$ 159,800       \$ 123,000         \$ 151,837       \$ 113,255         42,245       23,544         194,082       136,799         1,739       2,365         \$ 192,343       \$ 134,434         11,848,300       12,686,797         12,241,010       13,216,645         \$16.23       \$10.63	December         1977       1976         \$2,209,731       \$1,937,556       \$1         \$ 584,818       \$ 500,387       \$         \$ 16,990       \$ 18,756       \$         \$ 159,800       \$ 123,000       \$         \$ 151,837       \$ 113,255       \$         42,245       23,544       194,082       136,799         1,739       2,365         \$ 192,343       \$ 134,434       \$         11,848,300       12,686,797       17         12,241,010       13,216,645       18         \$16.23       \$10.63	\$2,209,731 \$1,937,556 \$1,714,972 \$584,818 \$500,387 \$391,269 \$16,990 \$18,756 \$22,254 \$159,800 \$123,000 \$85,300 \$151,837 \$113,255 \$82,619 42,245 23,544 19,087 194,082 136,799 101,706 1,739 2,365 3,425 \$192,343 \$134,434 \$98,281 11,848,300 12,686,797 17,320,108 12,241,010 13,216,645 18,043,608 \$16.23 \$10.63 \$5.74	December 31.         1977       1976       1975         \$2,209,731       \$1,937,556       \$1,714,972       \$1         \$ 584,818       \$ 500,387       \$ 391,269       \$         \$ 16,990       \$ 18,756       \$ 22,254       \$         \$ 159,800       \$ 123,000       \$ 85,300       \$         \$ 151,837       \$ 113,255       \$ 82,619       \$         42,245       23,544       19,087       194,082       136,799       101,706         1,739       2,365       3,425       \$       192,343       \$ 134,434       \$ 98,281       \$         \$ 11,848,300       12,686,797       17,320,108       23       23         \$ 12,241,010       13,216,645       18,043,608       \$         \$ 16.23       \$ 10.63       \$ 5.74	December 31,           1977         1976         1975         1974           \$2,209,731         \$1,937,556         \$1,714,972         \$1,699,987           \$584,818         \$500,387         \$391,269         \$328,793           \$16,990         \$18,756         \$22,254         \$22,561           \$159,800         \$123,000         \$85,300         \$64,200           \$151,837         \$113,255         \$82,619         \$62,826           42,245         23,544         19,087         (31,321)           194,082         136,799         101,706         31,505           1,739         2,365         3,425         3,662           \$192,343         \$134,434         \$98,281         \$27,843           \$11,848,300         12,686,797         17,320,108         23,772,430           \$12,241,010         13,216,645         18,043,608         N/A           \$16.23         \$10.63         \$5.74         \$1.23	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

The Company has paid 3 percent stock dividends applicable to the common stock during each of the years presented above; no cash dividends have been paid on the common stock.

### **Notes to Consolidated Summary of Operations**

(000's omitted except for per share amounts)

(A) Interest expense was \$29,954 in 1977, \$31,260 in 1976, \$34,980 in 1975, \$37,785 in 1974 and \$37,104 in 1973, of which \$12,964 in 1977, \$12,504 in 1976, \$12,726 in 1975, \$15,224 in 1974 and \$14,938 in 1973 was allocated to unconsolidated subsidiaries. Interest expense was allocated to unconsolidated subsidiaries based on the ratio of the Company's average investment in unconsolidated subsidiaries to the Company's average total capital. Interest expense on long-term debt approximated total interest expense for all periods presented.

(B) The consolidated provision for income taxes includes the following:

	1977	1976	1975	1974	1973
Federal	\$133,600	\$106,500	\$ 71,200	\$ 51,300	\$ 30,800
State	20,000	13,700	9,400	8,400	5,000
Foreign	6,200	2,800	4,700	4,500	3,600
Total	\$159,800	\$123,000	\$ 85,300	\$ 64,200	\$ 39,400
Current	\$154,500	\$116,200	\$ 76,700	\$ 55,100	\$ 41,200
Deferred	7,200	8,400	9,500	10,700	(400)
Investment tax credits	(1,900)	(1,600)	(900)	(1,600)	(1,400)
Total	\$159,800	\$123,000	\$ 85,300	\$ 64,200	\$ 39,400

- (C) The Company's equity in net income (loss) of its unconsolidated subsidiaries includes losses on sales of investments of \$1,402 in 1977, \$6,874 in 1976, \$9,435 in 1975, \$19,199 in 1974 and \$624 in 1973.
- (D) In order to meet current and future sinking fund requirements, the Company repurchased some of its long-term debt (\$4,726 in 1977, \$18,389 in 1976, \$20,142 in 1975 and \$59,071 in 1974). In addition, in 1976, the Company redeemed its 3½% subordinated debentures. The resulting gains and losses were included in the results of operations. These transactions resulted in an increase (decrease) in net income of \$(500) or \$(0.04) per share (\$(0.04) fully diluted) in 1977, \$(1,181) or \$(0.09) per share (\$(0.09) fully diluted) in 1976, \$3,362 or \$0.19 per share (\$0.19 fully diluted) in 1975 and \$2,555 or \$0.11 per share in 1974. In 1974, the Company realized a gain of \$12,196 or \$0.51 per share, after taxes, on the sale of assets of consolidated companies.

In 1977, the use of the equity method of accounting was adopted for certain investments held by the Company's unconsolidated subsidiaries; the 1976 summary of operations has been restated to reflect the effects of the use of this method. The use of the equity method resulted in an increase in the equity in net income of unconsolidated subsidiaries and net income by \$10,436 or \$0.88 per share (\$0.86 fully diluted) in 1977 and by \$1,920 or \$0.16 per share (\$0.14 fully diluted) in 1976. There was no effect on prior years.

During 1977, 1976 and 1975, inventory usage resulted in liquidations of last-in, first-out inventory quantities. These inventories were carried at the lower costs prevailing in prior years as compared with the cost of current purchases. The effect of these last-in, first-out inventory liquidations was to increase net income by approximately \$3,364 or \$0.28 per share (\$0.27 fully diluted) in 1977, \$4,725 or \$0.37 per share (\$0.36 fully diluted) in 1976 and \$6,150 or \$0.36 per share (\$0.34 fully diluted) in 1975.

In 1974, the Company extended its use of the last-in, first-out method of valuing inventory in order to reflect more accurately the results of operations by matching current costs against current revenues. As a result, income of consolidated companies and net income were reduced by \$6,400, or \$0.27 per share in 1974. Since inventories at the beginning of 1974 are the base inventories under the last-in, first-out method, there is no effect on the results of operations of prior years.

### Management's Discussion and Analysis of Summary of Operations

1977 Compared with 1976. Consolidated sales for the year ended December 31, 1977 increased approximately 14 percent from 1976, due both to price increases and increased demand. All business segments experienced sales increases, with the specialty metals and industrial segments experiencing increases of 18 percent and 16 percent, respectively. The increased gross profit is primarily attributable to the increased sales.

Interest expense declined in 1977, primarily as a result of the repurchases of debt discussed in Note D to the Consolidated Summary of Operations. Payroll taxes increased approximately 14 percent in 1977, a result of higher tax rates and a higher level of employment. Advertising costs increased approximately 11 percent in 1977, primarily in the consumer segment where new products were introduced during the year. The increased pretax income is the major reason for the higher 1977 provision for income taxes.

Equity in net income of unconsolidated subsidiaries increased in 1977. The casualty insurance subsidiaries contributed over one-half of this increase, with some improvements in underwriting and the realization of gains on sales of investments in 1977 compared to losses in 1976. The other major contribution to this increase was the effect of the use of the equity method of accounting for certain investments as discussed in Note D to the Consolidated Summary of Operations.

1976 Compared with 1975. Consolidated sales for the year ended December 31, 1976 increased approximately 13 percent from the preceding year, principally due to increased demand for the Company's products and to price increases. Except for the aviation and electronics segment, which experienced a 1.5 percent sales decline primarily due to cutbacks on certain government contracts, all segments of the consolidated operations had increased sales. The increase was particularly significant in the consumer segment, partially as a result of the introduction of several new products. Both gross profit and the gross profit rate increased in 1976, as a result of both more effective cost controls and an improved sales mix.

Interest expense decreased in 1976, principally as a result of repurchases of debt, including the redemption in April, 1976 of the 3½% subordinated debentures. The impact on earnings of these repurchases is discussed in Note D to the Consolidated Summary of Operations. Advertising expense approximately doubled in 1976, primarily in connection with the introduction of the new consumer products referred to above. Payroll taxes increased approximately 12 percent in 1976, in line with the increased production and increased number of employees. The substantial increase in the income tax provision resulted primarily from the increased pretax income.

Equity in net income of unconsolidated subsidiaries increased by approximately 13 percent in 1976, with improvements in the life insurance operations partially offset by a decline in the results of the casualty insurance companies. In both cases, the major changes were due to fluctuations in gains and losses on the sales of investments rather than to underwriting.

### Review

### **Revenue by Business Segment**

(000's Omitted)

	Year Ended										
		October 31,									
	1977	1976	1975	1974	1973						
Industrial	\$ 814,450	\$ 701,816	\$ 613,347	\$ 599,604	\$ 487,775						
Aviation and Electronics	491,096	453,383	460,255	433,180	408,899						
Specialty Metals	600,828	508,255	455,003	487,013	375,706						
Consumer	303,357	274,102	186,367	180,190	183,119						
Consolidated Sales	2,209,731	1,937,556	1,714,972	1,699,987	1,455,499						
Insurance and Finance	750,706	703,670	758,003	732,318	601,488						
Total	\$2,960,437	\$2,641,226	\$2,472,975	\$2,432,305	\$2,056,987						

### **Net Income by Business Segment**

(000's Omitted)

	Year Ended										
		December 31,								October 31,	
Industrial Aviation and Electronics Specialty Metals Consumer	1977		1976		1975		1974		1973		
	\$	61,494 31,696 36,279 22,368	\$	39,699 25,138 28,847 19,571	\$	36,788 17,709 15,046 13,076	\$	31,731 10,098 21,687 (690)	\$	13,374 12,154 15,151 (2,039)	
Consolidated Insurance and Finance		151,837 42,245		113,255 23,544		82,619 19,087		62,826 (31,321)		38,640 27,343	
Total	\$	194,082	\$	136,799	\$	101,706	\$	31,505	\$	65,983	

Additional 1977 information regarding business segments, including operating profit, assets, capital expenditures and depreciation, is presented in Note 16 to the Consolidated Financial Statements.

**Industrial Products** Teledyne's diverse line of industrial products represents the largest single area of activity.

Engines of all sorts—air and water cooled, gasoline and diesel fueled—are major products in this category. Teledyne piston engines range in power from lightweight, portable, air cooled engines of a few horsepower, up to heavy-duty turbocharged diesel engines approaching 2000 horsepower for use in military tanks and heavy construction equipment.

Another large category of industrial products includes machine tools, dies and consumable tooling of all types. These range from numerically-controlled pipe and tube bending machines to a great variety of machines designed for the high

speed production of precision machine threads by cutting, grinding and roll-forming methods, and a variety of similar equipment for the production of precision roll-formed gears. Presses, cut-off machines and can-making machines are also produced.

Other Teledyne production equipment includes transfer and assembly machines for the automated production of many kinds of products, as well as multi-gun automated resistance welding machines, single station manual resistance welding machines, welding power supplies, arc welding equipment, and consumable supplies such as welding electrodes and tubular and solid welding wire.

Unusual among Teledyne's welding products are the world's largest welding positioners and manipulators with capacities to 227 tons. These immense Teledyne machines are used worldwide by the nuclear industry for welding and cladding nuclear reaction vessels with stainless steel.

Teledyne also produces complete automated bakery production lines and chemical process equipment as well.

Closely related to the machine tool field are Teledyne's optical encoders and digital readouts which may be added to existing milling machines and other machine tools to modernize them, increase operator output and improve the accuracy of the work produced.

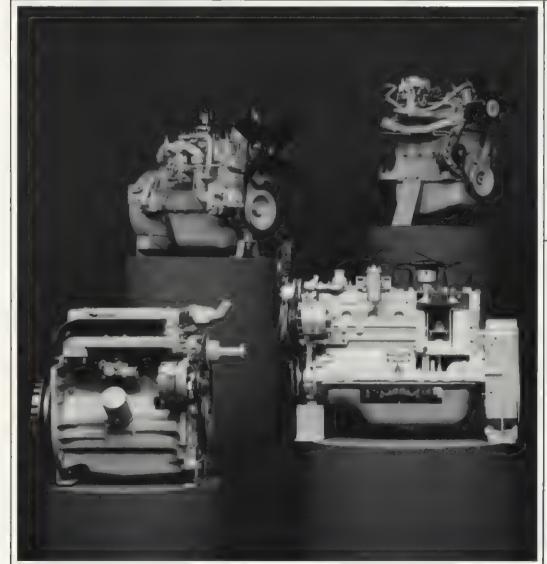
Teledyne also makes a variety of analytical instruments for pollution control, mine and industrial safety, petrochemical process control, and for medical and deep sea saturation diving applications.

These include percentage and parts per million

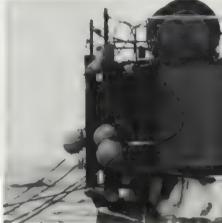
oxygen detectors, hydrocarbon detectors, and photometric instruments for measuring oil or phenol in water and dozens of other chemicals in the parts per million or billion range. Other related products include a variety of instruments for the physical testing of materials, meteorological instruments, equipment and services for the detection, monitoring and analysis of radioactive materials including nuclear dosimeters for monitoring the exposure levels of nuclear industry personnel, high-speed motion picture cameras, and equipment for the film recording of video images.

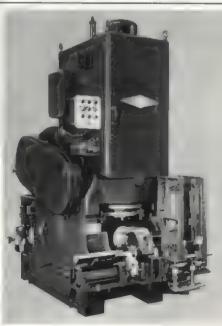
Control systems based on computer logic are provided to the petrochemical industry for controlling the flow of natural gas and oil through nationwide networks of pipelines. Electrically actuated control valves and large safety relief valves are supplied to this and other industries, as well.

Industrial Engines



Oil Exploration





Machine Tools

Teledyne also produces a complete line of seismic instrumentation and related computer systems used throughout the world in earthquake monitoring and oil exploration.

In addition, Teledyne carries out seismic surveys on land and under the sea bottom on a contract basis to locate likely oil bearing strata for major oil companies.

Related activities include the fabrication and installation of large offshore oil platforms for the oil industry, as well as drilling and workover services and a variety of maintenance and salvage operations carried out in offshore areas.

The company owns and operates a sea-going 500-ton derrick barge and numerous submersible, jack-up, and platform-type drilling rigs to carry on this work for the oil industry.

Sophisticated computer designed gas-lift

equipment and services are also provided by the company for stimulating and increasing the flow of older or less productive wells.

Related geophysical activities include aerial surveying and mapping services, as well as the production of a broad line of transits and theodolites for surveying use.

Among Teledyne's remaining miscellaneous industrial activities are the production of solid rubber tires and molded rubber products for the automotive industry.

Uninterruptible power supplies are produced for the computer industry to eliminate computer failures caused by substandard power or momentary power interruptions.

Thermoelectric generators fueled with propane or natural gas are made for use in remote unattended locations where small amounts of electrical

Offshore Drilling & Construction

High Speed Camera Systems







Seismometers

Hardfacing Welding Alloys

power are required, and other Teledyne thermoelectric generators powered by radioisotopic materials provide power for deep space missions such as the Viking probes to Mars. This same Teledyne division also produces high purity electrolytic hydrogen generators that are used in many laboratory and industrial processes.

At the end of this long list of industrial activities is the area of waste disposal. Teledyne engineers, produces and operates large scale solid waste systems for local municipalities, that efficiently recover useful metals and materials from rubbish while producing useful amounts of energy. Teledyne also provides services for the disposal of radioactive waste, as well.

**Aviation and Electronics** Products in the closely related fields of aviation and electronics range from the microscopic world of semi-

conductor devices to full-scale air frames and complete aircraft.

At the small end of the scale are Teledyne's basic semiconductor building blocks. These include transistors, diodes and integrated circuits. A step up from these tiny components are hybrid microcircuits the size of postage stamps, including a complete microcomputer that contains 72,000 active elements on a ceramic base the size of a soda cracker. In the two Viking missions to Mars, over twenty-seven hundred Teledyne hybrid microcircuits of various types were used.

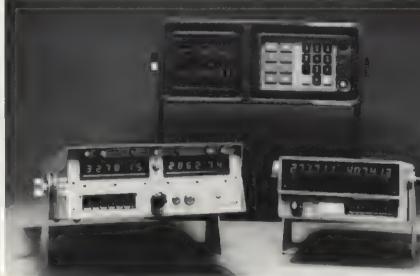
On a still larger scale are Teledyne's high power traveling wave tubes, used to simultaneously transmit thousands of telephone conversations—or a dozen television channels—around the world via satellite networks.

Other components include operational

Uninterruptible Power Systems



Navigation Systems





Industrial Tires

Aircraft Engines

amplifiers, digital-analog converters, miniature relays, radar augmentors, low power microwave tubes, flexible printed-circuit interconnections, high reliability wire and cable, switches, terminals, and a complete line of aircraft batteries.

At the systems level, Teledyne produces equipment for telemetering data from remote sources, for electronic countermeasures, and for information processing, as well as the AIDS aircraft integrated data systems used by dozens of major airlines to record in-flight performance and maintenance data on their jumbo jets.

Computing and inertial systems are also produced for the control and guidance of aircraft and space vehicles. Teledyne on-board computers have successfully controlled the launching of dozens of spacecraft, including both Viking missions to Mars.

Teledyne is heavily involved in electronic navi-

gation systems, as well, with Loran and Omega navigators for long range sea and air navigation, and Raydist systems for precise radiolocation in coastal waters. Doppler radar systems produced by Teledyne were used on 24 successful space landings, and guided each Apollo lander to the surface of the moon. Similar Doppler radars are used in military aircraft for antisubmarine warfare and search-andrescue missions.

Teledyne avionic instruments and electronic systems contribute substantially to flight safety in both military and general aviation aircraft.

Among Teledyne's many non-electronic products for aviation are controlled explosive devices that precisely time, sequence and actuate aircraft escape systems, and similar pyrotechnic devices used to separate the stages of space vehicles, and to eject or deploy instrument packages of many kinds. Tele-

Microelectronic Hybrids







Remotely Piloted Aircraft

dyne also produces parachute delivery systems for accurate air-drop of military cargo or emergency supplies.

Precise hydraulic and pneumatic actuating systems and components are made for both fixed and rotary wing aircraft, as are ground support systems such as frequency and power converters and jet engine starters for commercial and general aviation use.

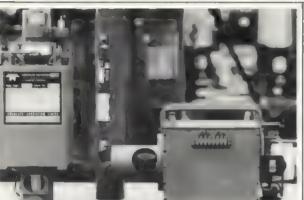
Continental piston engines have been powering airplanes for sixty years, and today about half of the general aviation piston engines produced in the United States are built by Teledyne and used worldwide. Teledyne turbine engines also power remotely-piloted aircraft, military trainers and, in small, expendable versions, provide propulsion for the Navy's Harpoon cruise missile.

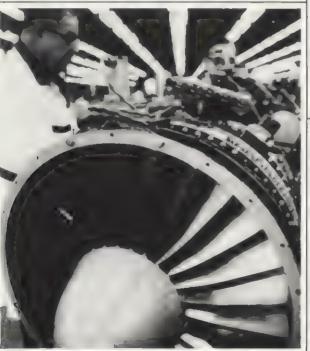
The company's expertise in airframe manufac-

ture goes back to Charles Lindberg's Spirit of St. Louis which was built by Ryan Aviation, forerunner of today's Teledyne Ryan Aeronautical. More than twenty-five types of remotely-piloted aircraft—usually called RPV's—have been built by Teledyne, in both supersonic and subsonic versions. These recoverable and reusable vehicles are used for sophisticated military missions with the pilots safely flying them from remote control centers. Teledyne is also building the airframe for the new Army attack helicopter and has produced thousands of feet of tapered, roll-formed stringers used in the Boeing 747 and Douglas DC-10 airframes.

Through the production of sophisticated RPV's Teledyne has also developed broad expertise in the use of advanced materials such as graphite composites, and has facilities for the numerically-controlled machining of airfoils from honeycomb

Traveling Wave Tubes





Aircraft Integrated Data Systems





**Turbine Engines** 

Wire & Cable

materials.

Teledyne's participation in all these diverse areas of aviation, space and electronics has given the company highly developed expertise in some of the most advanced technologies of our time.

**Specialty Metals** Teledyne specialty metals and alloys are used in industrial, aerospace and nuclear applications.

Basic to the production of virtually every modern metal product are Teledyne's high speed steels which provide the high temperature hardness required for lathe bits, drills, milling cutters, taps and dies and other cutting tools. Related alloy steels are produced for bearings, gears and special aerospace hardware.

Parallel to high speed steels is Teledyne's line of sintered tungsten carbide products, made by combining carbon, tungsten and various other metals under heat to produce a material that approaches the diamond in hardness, at far lower cost. It is vital for super hard cutters used in the high speed machining and cutting of steel and many other materials.

Among other metals produced by Teledyne are superalloys, engineered to retain their high tensile strength at temperatures approaching 2000° Fahrenheit, for use in jet engine turbine parts which operate under tremendous centrifugal forces at temperatures that would melt ordinary steels.

Teledyne is also one of the world's leading producers of tungsten, a unique metal that is the most heat resistant of all metals and is more than one-and-one-half times as dense as lead. Teledyne mines tungsten ore and produces both pure tungsten powder and tungsten carbide powder as well as finished tungsten mill products. It is used in diverse applica-

High Speed Steels



Superalloys





Investment Castings

tions ranging from light bulb filaments and electrical contacts to radiation shielding and aircraft counterweights.

Molybdenum, a sister metal to tungsten produced by Teledyne, also has a very high melting point. It is an important alloying element for steels and is used for plasma arc spraying of piston rings and for electrodes in glass melting furnaces.

In the area of more exotic metals, Teledyne produces columbium, also known as niobium, which retains its ductility at both high temperatures and low cryogenic temperatures. It is used for rocket nozzles, and, combined with other metals, is a prime ingredient of super-conducting alloys.

At the opposite end of the scale from tungsten is titanium, valued for its lightweight strength. Teledyne produces titanium in ingot, billet and coil for a variety of aerospace uses.

Teledyne is the largest U.S. producer of zirconium, a highly corrosion resistant metal that is transparent to neutrons. It is used for fuel tubes and structural parts in nuclear reactors, in the form of foil in flash cubes, and for corrosion-resistant chemical industry equipment. Hafnium, derived as a byproduct of zirconium, is used for control rods in nuclear reactors.

Teledyne also processes metals into a variety of finished forms. Over 60 different metals and alloys, for example, are rolled into ultrathin sheet and foil that is used for applications ranging from watch springs and flash bulbs to aerospace honeycomb materials.

Teledyne also casts a variety of metals into forms ranging from 90-ton steel mill rolls to lightweight aluminum and magnesium aircraft parts. High pressure pipe for the chemical industry is made by

Steel Mill Rolls

Zirconium







Forgings

centrifugal casting, and a variety of housings and parts are made for business machines, tools and automobiles by die casting methods. Cold-finished bar and shafting and cold-drawn seamless and welded tubing are also produced.

Other Teledyne companies are involved in rollforming metals, forging heavy parts for construction and earth moving machinery and precision investment casting of difficult to produce parts.

**Consumer & Other** Consumer products are a growing and important part of the company's business.

Teledyne's best known consumer products are sold under the brand name Water Pik. The original product in this line was the Water Pik Oral Hygiene Appliance, a device used to cleanse the teeth and gums with a pressurized jet of water. This product has been combined with an electric toothbrush to

form a complete family oral hygiene center.

A more recent Water Pik personal care product is the Shower Massage, a showerhead that can deliver a conventional spray or a refreshing jet massage.

Other products marketed under the Water Pik trademark include the Water Pik Sonic Siren Smoke Alarm, the Water Pik One Step At A Time cigarette smoking withdrawal system, the Instapure household water filter, and a complete infant feeding system for preparing, warming and serving wholesome baby foods, trademarked "The Nurtury."

Teledyne is also well known throughout the world for its line of acoustic suspension high fidelity speakers and its hi-fi record turntables marketed under the AR brand name.

In addition to manufacturing home entertainment products, Teledyne also operates a chain of 79 retail stores in the United States that sell electrical

**Roll Formed Metals** Tungsten Carbide Cutting Inserts Swimming Pool Heaters

**Nuclear Reactor Fuel Tubes** 

Thin Metals

and electronic components, tools, hobbyist supplies and a diverse range of home audio, stereo and video equipment. Some are sold under the private brand names of Teledyne and Olson, and the entire line is also marketed by mail order. Servicing and repair of electronic home entertainment products is also carried out through 40 nationwide service centers.

In an entirely different consumer area are Teledyne Laars swimming pool heaters, and a related line of equipment for heating buildings and supplying hot water for commercial and industrial use.

Teledyne also makes materials and equipment for dentists and dental laboratories. Among these are dental cements, impression compounds, highspeed turbine operated dental handpieces, diamond drilling burs and articulators.

Other miscellaneous products often sold directly to consumers include battery powered lamps, lan-

terns and emergency lighting equipment, engineering drafting supplies for professional and school use, diazo copying machines, and plastic cups and containers of various sorts.

Insurance & Finance
Company and Teledyne's other casualty insurance companies write a broad line of insurance including workers' compensation, liability, automobile, homeowners, and fire insurance.

Unicoa Corporation, 95% owned by Teledyne, writes life and health and accident insurance. Fireside Thrift, a consumer finance company, operates in the states of California and Hawaii.

**AR Acoustic Suspension Speakers** 



Retail Electronics





Oral Hygiene & Professional Dental Products

**Drafting Equipment & Supplies** 

# **Historical Summary**

	Consolidated Sales	Net Income	Net Income Per Share	Consolidated Assets	Shareholders' Equity	Average Common Shares
1977	\$2,209,731,000	\$194,082,000	\$16.23	\$1,420,140,000	\$683,197,000	11,848,300
1976	1,937,556,000	136,799,000	10.63	1,207,545,000	495,474,000	12,686,797
1975	1,714,972,000	101,706,000	5.74	1,138,479,000	491,309,000	17,320,108
1974	1,699,987,000	31,505,000	1.23	1,132,913,000	501,793,000	23,772,430
1973	1,455,499,000	65,983,000	2.26	1,232,408,000	537,815,000	28,271,875
1972	1,215,991,000	59,285,000	1.49	1,128,809,000	484,960,000	38,341,909
1971	1,101,872,000	57,425,000	1.40	1,066,772,000	608,118,000	39,693,840
1970	1,216,448,000	61,864,000	1.54	960,607,000	584,349,000	38,859,668
1969	1,294,775,000	58,119,000	1.53	938,133,000	501,961,000	37,399,511
1968	806,747,000	40,289,000	1.24	602,428,000	316,469,000	32,532,228
1967	451,060,000	21,256,000	0.86	336,714,000	152,603,000	25,443,952
1966	256,751,000	12,035,000	0.64	170,369,000	90,205,000	18,780,882
1965	86,504,000	3,402,000	0.35	66,544,000	34,765,000	9,442,633
1964	38,187,000	1,441,000	0.23	35,040,000	13,672,000	5,865,957
1963	31,925,000	731,000	0.13	23,901,000	8,629,000	4,805,218
1962	10,438,000	157,000	0.04	10,844,000	3,527,000	3,807,319
1961	4,491,000	58,000	0.02	3,731,000	2,477,000	2,848,802

As reported in the Company's annual reports, adjusted for dividends and stock splits. 1976 was restated to reflect equity accounting. Years 1967 through 1975 are restated for certain accounting changes. Average common shares include common stock equivalents.



#### **Board of Directors**

HENRY E. SINGLETON, Chairman and Chief Executive Officer, Teledyne, Inc.

ROBERT C. JACKSON, Honorary Chairman, Teledyne Ryan Aeronautical

GEORGE KOZMETSKY, Dean of the College of Business Administration of the University of Texas

GEORGE A. ROBERTS, President, Teledyne, Inc.

ARTHUR ROCK, Private Investor

CLAUDE E. SHANNON, Donner Professor of Science at Massachusetts Institute of Technology

## Officers

HENRY E. SINGLETON, Chief Executive Officer and Chairman of the Board of Directors

GEORGE A. ROBERTS, President

ROBERT S. BELL, Vice President

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JERROLD V. JEROME, Vice President

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J. SPENCER LETTS, Vice President and Secretary

CHARLES E. RINSCH, Vice President and Treasurer

G. WILLIAMS RUTHERFORD, Vice President

BARRY J. SHILLITO, Vice President

TECK A. WILSON, Vice President

#### **Corporate Offices**

1901 Avenue of the Stars Los Angeles, California 90067

## Transfer Agents

Bank of America N.T. & S.A.

Corporate Agency Service Center

P.O. Box 37002

San Francisco, California 94137

United States Trust Company of New York 45 Wall Street New York, New York 10005

### Registrars

Security Pacific National Bank One Embarcadero Center San Francisco, California 94111

Citibank, N.A.

111 Wall Street

New York, New York 10015

